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Experimental verification of a negative index of refraction

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2272	Pulsed and CW Gaussian beam interactions with double negative metamaterial slabs. 2003 , 11, 662		
2271	Pulsed and CW Gaussian beam interactions with double negative metamaterial slabs. 2003 , 11, 662		
2270	Pulsed and CW Gaussian beam interactions with double negative metamaterial slabs. 2003 , 11, 662		
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2268	Pulsed and CW Gaussian beam interactions with double negative metamaterial slabs. 2003 , 11, 662		
2267	Pulsed and CW Gaussian beam interactions with double negative metamaterial slabs. 2003 , 11, 662		
2266	Pulsed and CW Gaussian beam interactions with double negative metamaterial slabs. 2003 , 11, 662		
2265	Experimental and theoretical verification of focusing in a large, periodically loaded transmission line negative refractive index metamaterial. 2003 , 11, 696		
2264	Negative effective permeability and left-handed materials at optical frequencies. 2006 , 14, 1557		
2263	Photorealistic images of objects in effective negative-index materials. 2006 , 14, 1842		
2262	Photorealistic images of objects in effective negative-index materials. 2006 , 14, 1842		
2261	Photorealistic images of objects in effective negative-index materials. 2006 , 14, 1842		
2260	Photorealistic images of objects in effective negative-index materials. 2006 , 14, 1842		
2259	Perfect lens makes a perfect trap. 2006 , 14, 2228		
2258	Perfect lens makes a perfect trap. 2006 , 14, 2228		
2257	Perfect lens makes a perfect trap. 2006 , 14, 2228		

2256 Perfect lens makes a perfect trap. **2006**, 14, 2228

2255 Left-handed extraordinary optical transmission through a photonic crystal of subwavelength hole arrays. **2006**, 14, 5445

2254 Left-handed extraordinary optical transmission through a photonic crystal of subwavelength hole arrays. **2006**, 14, 5445

2253 Left-handed extraordinary optical transmission through a photonic crystal of subwavelength hole arrays. **2006**, 14, 5445

2252 Group front evolution of Gaussian beam refracted from a right- to left-handed medium. **2006**, 14, 8232

2251 Group front evolution of Gaussian beam refracted from a right- to left-handed medium. **2006**, 14, 8232

2250 Group front evolution of Gaussian beam refracted from a right- to left-handed medium. **2006**, 14, 8232

2249 Spatial mapping of the internal and external electromagnetic fields of negative index metamaterials. **2006**, 14, 8694

2248 Spatial mapping of the internal and external electromagnetic fields of negative index metamaterials. **2006**, 14, 8694

2247 Spatial mapping of the internal and external electromagnetic fields of negative index metamaterials. **2006**, 14, 8694

2246 Spatial mapping of the internal and external electromagnetic fields of negative index metamaterials. **2006**, 14, 8694

2245 Spatial mapping of the internal and external electromagnetic fields of negative index metamaterials. **2006**, 14, 8694

2244 Spatial mapping of the internal and external electromagnetic fields of negative index metamaterials. **2006**, 14, 8694

2243 Spatial mapping of the internal and external electromagnetic fields of negative index metamaterials. **2006**, 14, 8694

2242 Spatial mapping of the internal and external electromagnetic fields of negative index metamaterials. **2006**, 14, 8694

2241 Three-dimensional structures in nonlinear cavities containing left-handed materials. **2006**, 14, 9338

2240 Three-dimensional structures in nonlinear cavities containing left-handed materials. **2006**, 14, 9338

2239 Negative refractions in two-dimensional photonic crystals formed by holographic lithography. **2007**, 15, 8003

2238 Negative refractions in two-dimensional photonic crystals formed by holographic lithography. **2007**, 15, 8003

2237 Polarized left-handed extraordinary optical transmission of subterahertz waves. **2007**, 15, 8125

2236 Negative refraction in a prism made of stacked subwavelength hole arrays. **2008**, 16, 560

2235 Negative refraction in a prism made of stacked subwavelength hole arrays. **2008**, 16, 560

2234 Negative refraction in a prism made of stacked subwavelength hole arrays. **2008**, 16, 560

2233 An anisotropic negative refractive index medium operated at multiple-angle incidences. **2009**, 17, 24189

2232 An anisotropic negative refractive index medium operated at multiple-angle incidences. **2009**, 17, 24189

2231 Nonlinear pulsed excitation of high-Q optical modes of plasmonic nanocavities. **2010**, 18, 17165

2230 Nonlinear pulsed excitation of high-Q optical modes of plasmonic nanocavities. **2010**, 18, 17165

2229 Reconfigurable quantum metamaterials. **2011**, 19, 11018

2228 Reconfigurable quantum metamaterials. **2011**, 19, 11018

2227 Fabrication of three dimensional split ring resonators by stress-driven assembly method. **2012**, 20, 9415

2226 Bifunctional plasmonic metamaterials enabled by subwavelength nano-notches for broadband, polarization-independent enhanced optical transmission and passive beam-steering. **2013**, 21, 31492

2225 THz band-stop filter using metamaterials surfaced on LiNbO₃ sub-wavelength slab waveguide. **2015**, 23, 16042

2224 Broadband high efficiency asymmetric transmission of achiral metamaterials. **2015**, 23, 19535

2223 Broadband high efficiency asymmetric transmission of achiral metamaterials. **2015**, 23, 19535

2222 Broadband high efficiency asymmetric transmission of achiral metamaterials. **2015**, 23, 19535

2221 Broadband high efficiency asymmetric transmission of achiral metamaterials. **2015**, 23, 19535

- 2220 Broadband high efficiency asymmetric transmission of achiral metamaterials. **2015**, 23, 19535
- 2219 Broadband asymmetric light transmission via all-dielectric digital metasurfaces. **2015**, 23, 20961
- 2218 Transmission study of prisms and slabs of lossy negative index media. **2004**, 12, 2081
- 2217 Transmission study of prisms and slabs of lossy negative index media. **2004**, 12, 2081
- 2216 Excitation of guided waves in layered structures with negative refraction. **2005**, 13, 481
- 2215 Excitation of guided waves in layered structures with negative refraction. **2005**, 13, 481
- 2214 Excitation of guided waves in layered structures with negative refraction. **2005**, 13, 481
- 2213 Excitation of guided waves in layered structures with negative refraction. **2005**, 13, 481
- 2212 Three-dimensional photonic crystal flat lens by full 3D negative refraction. **2005**, 13, 5592
- 2211 Three-dimensional photonic crystal flat lens by full 3D negative refraction. **2005**, 13, 5592
- 2210 Waveguiding, collimation and subwavelength concentration in photonic crystals. **2005**, 13, 7997
- 2209 Refraction and rightness in photonic crystals. **2005**, 13, 8596
- 2208 Second harmonic generation in a generic negative index medium. **2010**, 27, 1671
- 2207 Pulsed and CW Gaussian beam interactions with double negative metamaterial slabs. **2003**, 11, 662
- 2206 Experimental and theoretical verification of focusing in a large, periodically loaded transmission line negative refractive index metamaterial. **2003**, 11, 696
- 2205 Left-handed extraordinary optical transmission through a photonic crystal of subwavelength hole arrays. **2006**, 14, 5445
- 2204 Group front evolution of Gaussian beam refracted from a right- to left-handed medium. **2006**, 14, 8232
- 2203 Spatial mapping of the internal and external electromagnetic fields of negative index metamaterials. **2006**, 14, 8694

2202	Subdiffraction focusing of scanning beams by a negative-refraction layer combined with a nonlinear layer. 2006 , 14, 11194	
2201	Probing negative refractive index of metamaterials by terahertz time-domain spectroscopy. 2008 , 16, 1354	
2200	Structural-configured magnetic plasmon bands in connected ring chains. 2009 , 17, 11486	
2199	Broadband high efficiency asymmetric transmission of achiral metamaterials. 2015 , 23, 19535	
2198	Broadband asymmetric light transmission via all-dielectric digital metasurfaces. 2015 , 23, 20961	
2197	Transmission study of prisms and slabs of lossy negative index media. 2004 , 12, 2081	
2196	Transmission study of prisms and slabs of lossy negative index media. 2004 , 12, 2081	
2195	Transmission study of prisms and slabs of lossy negative index media. 2004 , 12, 2081	
2194	Transmission study of prisms and slabs of lossy negative index media. 2004 , 12, 2081	
2193	Excitation of guided waves in layered structures with negative refraction. 2005 , 13, 481	
2192	Refraction and rightness in photonic crystals. 2005 , 13, 8596	
2191	Dual-band, double-negative, polarization-independent metamaterial for the visible spectrum. 2012 , 29, 2839	
2190	Realization of band-pass filter based on LH transmission.	
2189	Long-Term Storage of Videotape. 1983 , 92, 650-654	3
2188	Transmission studies of left-handed materials. 2001 , 65,	106
2187	Superluminal but causal wave propagation. 2001 ,	0
2186	Full-wave verification of the fundamental properties of left-handed materials in waveguide configurations. 2001 , 90, 5483-5486	117
2185	BW media media with negative parameters, capable of supporting backward waves. 2001 , 31, 129-133	299

2184	Meta-materials with wideband negative permittivity and permeability. 2001 , 31, 163-165	92
2183	Wave propagation in media having negative permittivity and permeability. 2001 , 64, 056625	650
2182	Unconditionally stable algorithms to solve the time-dependent Maxwell equations. 2001 , 64, 066705	38
2181	Transmission losses in left-handed materials. 2002 , 66, 045601	28
2180	Microwire arrays with plasmonic response at microwave frequencies. 2002 , 81, 2896-2898	29
2179	Efficient isotropic magnetic resonators. 2002 , 81, 939-941	78
2178	Relativistic energy loss in a dispersive medium. 2002 , 66,	1
2177	Negative refraction of modulated electromagnetic waves. 2002 , 81, 2713-2715	115
2176	Optomagnetic composite medium with conducting nanoelements. 2002 , 66,	79
2175	Losses for microwave transmission in metamaterials for producing left-handed materials: The strip wires. 2002 , 81, 4470-4472	12
2174	Electromagnetics and exotic media: a quest for the holy grail. 2002 , 44, 48-58	18
2173	All-angle negative refraction in a three-dimensionally periodic photonic crystal. 2002 , 81, 2352-2354	152
2172	A backward-wave antenna based on negative refractive index L-C networks.	57
2171	Double negative metamaterial design, experiments, and applications.	5
2170	Left-Handed Transmission Lines and Equivalent Metamaterials for Microwave and Millimeter-Wave Applications. 2002 ,	4
2169	Refining the Perfect Lens: Layered Media and Optical gain. 2002 ,	
2168	Near-field lenses in two dimensions. 2002 , 14, 8463-8479	86
2167	Interacting Magnetic Resonators for Left-Handed Metamaterials. 2002 ,	

2166 Photonic band gap structures composed of exotic materials.

2165 The asymmetric lossy near-perfect lens. **2002**, 49, 1747-1762

127

2164 Structural composites with integrated electromagnetic functionality. **2002**, 4698, 237

5

2163 Modelling and Microwave Properties of Artificial Materials with Negative Parameters. **2002**, 99-122

9

2162 Ideas for Potential Applications of Metamaterials with Negative Permittivity and Permeability. **2002**, 19-37

13

2161 Optical Nanolithography Using Evanescent Fields. **2002**, 739, 241

2160 Combined numerical and analytic approach for generalized models of complex bi-anisotropic materials. **2002**, 4806, 92

3

2159 Electromagnetics of complex media and metamaterials.

3

2158 Resonance cone formation, reflection, refraction, and focusing in a planar anisotropic metamaterial. **2002**, 1, 146-149

67

2157 High-frequency near-field microscopy. **2002**, 73, 2505-2525

179

2156 Magnetic activity at infrared frequencies in structured metallic photonic crystals. **2002**, 14, 6383-6394

135

2155 All-angle negative refraction without negative effective index. **2002**, 65,

684

2154 Role of bianisotropy in negative permeability and left-handed metamaterials. **2002**, 65,

618

2153 Is there an experimental verification of a negative index of refraction yet?. **2002**, 27, 885-7

81

2152 An idea for thin subwavelength cavity resonators using metamaterials with negative permittivity and permeability. **2002**, 1, 10-13

404

2151 Unusual photon tunneling in the presence of a layer with a negative refractive index. **2002**, 80, 1097-1099

148

2150 Post- versus pre-resonance characteristics of axially excited chiral sculptured thin films. **2002**, 113, 97-99

4

2149 A metamaterial for directive emission. **2002**, 89, 213902

797

2148	Negative refractive index metamaterials supporting 2-D waves.	112
2147	Photonic band-gap effects and magnetic activity in dielectric composites. 2002 , 14, 4035-4044	258
2146	Magnetoinductive waves in one, two, and three dimensions. 2002 , 92, 6252-6261	305
2145	Numerical studies of left-handed materials and arrays of split ring resonators. 2002 , 65, 036622	168
2144	Effectively left-handed (negative index) composite material. 2002 , 81, 1753-1755	127
2143	Electrodynamics of metallic photonic crystals and the problem of left-handed materials. 2002 , 89, 093901	108
2142	Effects of surface waves on the behavior of perfect lenses. 2002 , 66,	60
2141	Experimental verification of backward-wave radiation from a negative refractive index metamaterial. 2002 , 92, 5930-5935	385
2140	Electrodynamics of Media with Simultaneously Negative Electric Permittivity and Magnetic Permeability. 2002 , 83-97	8
2139	Electromagnetic resonances in individual and coupled split-ring resonators. 2002 , 92, 2929-2936	298
2138	Transmission properties of composite metamaterials in free space. 2002 , 81, 120-122	168
2137	New Unconditionally Stable Algorithms to Solve the Time-Dependent Maxwell Equations. 2002 , 803-812	1
2136	Application of the transmission line theory of left-handed (LH) materials to the realization of a microstrip "LH line".	166
2135	Theoretical investigation on the possibility of preparing left-handed materials in metallic magnetic granular composites. 2002 , 65,	134
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2133	Characteristics of electromagnetic wave propagation in uniaxially anisotropic left-handed materials. 2002 , 66,	142
2132	Power propagation in homogeneous isotropic frequency-dispersive left-handed media. 2002 , 89, 257401	124
2131	Two-dimensional electromagnetic crystals formed by reactively loaded wires. 2002 , 66, 036610	36

2130	Analytical investigation of periodic media with negative parameters.	0
2129	Anomalous mode coupling in guided-wave structures containing metamaterials with negative permittivity and permeability.	9
2128	A lens less ordinary. 2002 , 420, 119-20	15
2127	Waves in a Slab of Uniaxial Bw Medium. 2002 , 16, 303-318	25
2126	Wave refraction in negative-index media: always positive and very inhomogeneous. 2002 , 88, 187401	247
2125	Lateral displacement of a Gaussian beam reflected from a grounded slab with negative permittivity and permeability. 2002 , 80, 2084-2086	127
2124	Photonic band gap structure containing metamaterial with negative permittivity and permeability. 2002 , 66, 036611	63
2123	Electromagnetic Wave Interaction with Stratified Negative Isotropic Media. 2002 , 35, 1-52	89
2122	. 2002 , 50, 2702-2712	952
2121	Simulation study of perfect lenses for near-field optical nanolithography. 2002 , 61-62, 97-103	23
2120	Reversal of Circular Bragg Phenomenon in Ferrocholesteric Materials with Negative Real Permittivities and Permeabilities. 2002 , 14, 447-449	10
2119	Reversed circular dichroism of isotropic chiral mediums with negative real permeability and permittivity. 2002 , 33, 96-97	11
2118	A unique lateral displacement of a Gaussian beam transmitted through a slab with negative permittivity and permeability. 2002 , 33, 136-139	52
2117	On reflection from a half-space with negative real permittivity and permeability. 2002 , 33, 465-467	7
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2115	Negative index of refraction and distributed Bragg reflectors. 2002 , 34, 409-411	31
2114	Wire media with negative effective permittivity: A quasi-static model. 2002 , 35, 47-51	125
2113	A new 2D isotropic left-handed metamaterial design: Theory and experiment. 2002 , 35, 405-408	66

2112	Radiation from a traveling-wave current sheet at the interface between a conventional material and a metamaterial with negative permittivity and permeability. 2002 , 35, 460-463	36
2111	A neural network approach to real-time dielectric characterization of materials. 2002 , 35, 463-465	5
2110	Spectral response of Cantor multilayers made of materials with negative refractive index. 2002 , 301, 377-381	17
2109	Sign of refractive index and group velocity in left-handed media. 2002 , 124, 283-287	43
2108	Causality and the nature of information. 2002 , 209, 85-100	37
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2106	Recent developments in exotic materials: negative permittivity and permeability, nonreciprocal composites.	1
2105	The negative index of refraction demystified. 2002 , 23, 353-359	167
2104	Goos-Hänchen shift in negatively refractive media. 2002 , 66, 067603	228
2103	Dominant mode leaky-wave antenna with backfire-to-endfire scanning capability. 2002 , 38, 1414	341
2102	Determination of effective permittivity and permeability of metamaterials from reflection and transmission coefficients. 2002 , 65,	1916
2101	Brief Overview of Recent Developments on Negative Phase Velocity Mediums (alias Left Handed Materials). 2002 , 56, 407-410	33
2100	Limitations on subdiffraction imaging with a negative refractive index slab. 2003 , 82, 1506-1508	396
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2098	Refraction in media with a negative refractive index. 2003 , 90, 107402	304
2097	Guided modes with imaginary transverse wave number in a slab waveguide with negative permittivity and permeability. 2003 , 93, 9386-9388	144
2096	Design, fabrication, and testing of double negative metamaterials. 2003 , 51, 1516-1529	515
2095	On Planewave Remittances and Goos-Hänchen Shifts of Planar Slabs with Negative Real Permittivity and Permeability. 2003 , 23, 71-75	103

2094	Giant Goos-Hänchen effect at the reflection from left-handed metamaterials. 2003 , 83, 2713-2715	207
2093	Left-handed metamaterial and its experimental verifications. 2003 , 48, 1325-1327	1
2092	Multifunctional material systems: The first generation. 2003 , 55, 39-45	78
2091	Tailoring double-negative metamaterial responses to achieve anomalous propagation effects along microstrip transmission lines. 2003 , 51, 2306-2314	28
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2089	Notes on waves with negative phase velocity. 2003 , 9, 102-105	17
2088	Abnormal wave propagation in passive media. 2003 , 9, 30-39	44
2087	Intensity distribution inside scatterers with negative-real permittivity and permeability. 2003 , 36, 150-154	8
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2085	Bragg reflectors containing left-handed materials. 2003 , 38, 494-495	11
2084	Is Foster's reactance theorem satisfied in double-negative and single-negative media?. 2003 , 39, 11-14	8
2083	Near-field imaging by negative permittivity media. 2003 , 39, 282-286	10
2082	Quantized-field description of light in negative-index media. 2003 , 228, 161-165	27
2081	Diffraction theory and focusing of light by a slab of left-handed material. 2003 , 338, 333-337	22
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2078	Refining the perfect lens. 2003 , 338, 329-332	70
2077	Surface modes at the interface of conventional and left-handed media. 2003 , 225, 233-240	75

2076	Fractional duality and metamaterials with negative permittivity and permeability. 2003 , 227, 143-146	19
2075	Numerical investigation of negative refractive index metamaterials at infrared and optical frequencies. 2003 , 223, 331-337	34
2074	Enhancing photon tunnelling by a slab of uniaxially anisotropic left-handed material. 2003 , 308, 294-301	22
2073	Studies of imaging characteristics for a slab of a lossy left-handed material. 2003 , 309, 298-305	13
2072	Frequency range and explicit expressions for negative permittivity and permeability for an isotropic medium formed by a lattice of perfectly conducting particles. 2003 , 311, 254-263	122
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2070	Propagation of waves in metallic photonic crystals at low frequencies and some theoretical aspects of left-handed materials. 2003 , 338, 196-200	
2069	Topsy-turvy world of materials. 2003 , 6, 18-23	4
2068	On the possibility of creating artificial media simultaneously possessing negative permittivity and permeability. 2003 , 29, 32-34	4
2067	Optics: Positively negative. 2003 , 423, 22-3	93
2066	Genomics: Relative pathogenic values. 2003 , 423, 23-5	10
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2061	Photonic crystals: imaging by flat lens using negative refraction. 2003 , 426, 404	409
2060	Normal wake and reversed resonant radiation of a charge moving along a slow-wave system. 2003 , 508, 245-256	2
2059	Imaging properties of uniaxially anisotropic negative refractive index materials. 2003 , 313, 316-324	17

2058	.	8
2057	Photonic band gap from a stack of positive and negative index materials. 2003 , 90, 083901	435
2056	Causality and double-negative metamaterials. 2003 , 68, 026615	63
2055	Nonlinearity of a metamaterial arising from diode insertions into resonant conductive elements. 2003 , 67, 065601	152
2054	Properties of defect states in one-dimensional photonic crystals with structural defect layer made by left-handed material.	
2053	Resonant and antiresonant frequency dependence of the effective parameters of metamaterials. 2003 , 68, 065602	339
2052	Left-Handed Materials. 2003 , 308-329	
2051	Toward photonic-crystal metamaterials: Creating magnetic emitters in photonic crystals. 2003 , 82, 1069-1071	54
2050	TRANSMISSION ENHANCEMENT USING A NEGATIVE-REFRACTION LAYER. 2003 , 7, 221-234	11
2049	Experimental verification and simulation of negative index of refraction using Snell's law. 2003 , 90, 107401	609
2048	Transmission line models for negative refractive index media and associated implementations without excess resonators. 2003 , 13, 51-53	152
2047	Strong spatial dispersion in wire media in the very large wavelength limit. 2003 , 67,	435
2046	Pairing an epsilon-negative slab with a mu-negative slab: resonance, tunneling and transparency. 2003 , 51, 2558-2571	444
2045	. 2003 , 51, 2550-2557	87
2044	Waves and Energy in Chiral Nihility. 2003 , 17, 695-706	339
2043	Reflection phase characterizations of the EBG ground plane for low profile wire antenna applications. 2003 , 51, 2691-2703	511
2042	Waveguide containing a backward-wave slab. 2003 , 38, n/a-n/a	26
2041	Restricted equivalence of paired epsilon-negative and mu-negative layers to a negative phase-velocity material (alias left-handed material). 2003 , 114, 305-307	45

2040	Surface-wave suppression in a double-negative metamaterial grounded slab. 2003 , 2, 269-272	26
2039	Negative group velocity Lamb waves on plates and applications to the scattering of sound by shells. 2003 , 113, 2659-62	39
2038	Terahertz plasmonic high pass filter. 2003 , 83, 201-203	167
2037	Lens based on the use of left-handed materials. 2003 , 42, 5701-5	15
2036	Absorption losses in periodic arrays of thin metallic wires. 2003 , 28, 846-8	21
2035	Total external reflection from metamaterials with ultralow refractive index. 2003 , 20, 2448	80
2034	Numerical study of electromagnetic waves interacting with negative index materials. 2003 , 11, 640-8	54
2033	Pulsed and CW Gaussian beam interactions with double negative metamaterial slabs. 2003 , 11, 662-81	151
2032	Experimental and theoretical verification of focusing in a large, periodically loaded transmission line negative refractive index metamaterial. 2003 , 11, 696-708	98
2031	Cerenkov radiation in materials with negative permittivity and permeability. 2003 , 11, 723-34	109
2030	Negative refraction without negative index in metallic photonic crystals. 2003 , 11, 746-54	99
2029	On unusual narrow transmission bands for a multi-layered periodic structure containing left-handed materials. 2003 , 11, 1283-90	47
2028	Losses in left-handed materials. 2003 , 11, 2397-402	35
2027	Guided modes in channel waveguides with a negative index of refraction. 2003 , 11, 2502-10	41
2026	Novel microwave devices and structures based on the transmission line approach of meta-materials.	60
2025	Guided modes in negative-refractive-index waveguides. 2003 , 67, 057602	259
2024	Removal of absorption and increase in resolution in a near-field lens via optical gain. 2003 , 67,	206
2023	Numerical study of a Gaussian beam propagating in media with negative permittivity and permeability by using a bidirectional beam propagation method. 2003 , 37, 292-296	10

2022	Periodically loaded transmission line with effective negative refractive index and negative group velocity. 2003 , 51, 2619-2625	175
2021	Periodic analysis of a 2-D negative refractive index transmission line structure. 2003 , 51, 2604-2611	134
2020	Subwavelength resolution in a two-dimensional photonic-crystal-based superlens. 2003 , 91, 207401	276
2019	Compact linear lead/lag metamaterial phase shifters for broadband applications. 2003 , 2, 103-106	246
2018	Rapid growth of evanescent wave by a silver superlens. 2003 , 83, 5184-5186	140
2017	Imaging properties of a metamaterial superlens. 2003 , 82, 161-163	237
2016	Electrodynamics of materials with negative index of refraction. 2003 , 173, 790	37
2015	Backward wave region and negative material parameters of a structure formed by lattices of wires and split-ring resonators. 2003 , 51, 2582-2591	71
2014	Distributed-circuit-element description of guided-wave structures and cavities involving double-negative or single-negative media. 2003 ,	5
2013	Field dependent permittivity of composite materials containing ferromagnetic wires. 2003 , 93, 4120-4129	87
2012	Anisotropy and oblique total transmission at a planar negative-index interface. 2003 , 68,	48
2011	Band structure for a one-dimensional photonic crystal containing left-handed materials. 2003 , 67,	81
2010	Optical and Thermal Radiative Properties of Semiconductors Related to Micro/Nanotechnology. 2003 , 37, 179-296	49
2009	Experimental results on metamaterial simulation using SRR-loaded waveguides.	1
2008	Total negative refraction in real crystals for ballistic electrons and light. 2003 , 91, 157404	137
2007	Dispersion analysis of a microstrip-based negative refractive index periodic structure. 2003 , 13, 155-157	40
2006	Theoretical analysis of left-handed metamaterials using FDTD-PML method.	3
2005	Imaging the near field. 2003 , 50, 1419-1430	238

2004	Existence and design of trans-vacuum-speed metamaterials. 2003 , 68, 026612	5
2003	A branch-line coupler with two arbitrary operating frequencies using left-handed transmission lines.	4
2002	Influence of the dispersive properties of metals on the transmission characteristics of left-handed materials. 2003 , 68, 016611	27
2001	A planar metamaterial co-directional coupler that couples power backwards.	18
2000	Experimental observations of a left-handed material that obeys Snell's law. 2003 , 90, 137401	560
1999	Electromagnetic-field quantization and spontaneous decay in left-handed media. 2003 , 68,	135
1998	Design and optimization of locally resonating sonic crystals.	1
1997	Cerenkov radiation in photonic crystals. <i>Science</i> , 2003 , 299, 368-71	33.3 215
1996	Growing evanescent waves in negative-refractive-index transmission-line media. 2003 , 82, 1815-1817	92
1995	Transmission and reflection properties of composite double negative metamaterials in free space. 2003 , 51, 2592-2595	77
1994	Optical lenses by photonic crystals.	
1993	Modified Kramers-Kronig relations and sum rules for meromorphic total refractive index. 2003 , 68,	4
1992	A negative reflective/refractive "meta-interface" using a bi-directional phase-conjugating array.	4
1991	Positive/negative refractive index anisotropic 2-D metamaterials. 2003 , 13, 547-549	34
1990	Subwavelength focusing using a negative-refractive-index transmission line lens. 2003 , 2, 186-189	23
1989	Power flow for resonance cone phenomena in planar anisotropic metamaterials. 2003 , 51, 2612-2618	44
1988	Spatial filtering using media with indefinite permittivity and permeability tensors. 2003 , 82, 2215-2217	75
1987	The richness of the dispersion relation of electromagnetic bandgap materials. 2003 , 51, 2659-2666	38

1986	Tailoring the dielectric properties of meta materials.	0
1985	Experimental results of planar meta materials.	
1984	Negative-refractive-index metamaterials using loaded transmission lines and enabling RF devices.	
1983	Disorder effects on negative refractive lens made by photonic crystals.	
1982	Tailoring double negative metamaterial responses to achieve anomalous propagation effects along microstrip transmission lines.	1
1981	Mode excitation by a line source in a parallel-plate waveguide filled with a pair of parallel double-negative and double-positive slabs.	2
1980	Effects Due to and Derived from Spontaneous Ordering in III-V Semiconductor Alloys. 2003 , 794, 31	1
1979	Multiband subwavelength magnetic reflectors based on fractals. 2003 , 83, 3257-3259	35
1978	Universal features of the time evolution of evanescent modes in a left-handed perfect lens. 2003 , 90, 077401	91
1977	Electromagnetic waves focused by a negative-index planar lens. 2003 , 67, 025602	64
1976	Free-space focused-beam characterization of left-handed materials. 2003 , 82, 2535-2537	79
1975	Focusing of electromagnetic waves by periodic arrays of dielectric cylinders. 2003 , 67,	13
1974	Metamaterials with negative permittivity and permeability: background, salient features, and new trends.	7
1973	Metamaterials: a new concept in the microwave technique.	3
1972	Subwavelength imaging in photonic crystals. 2003 , 68,	325
1971	Simulated causal subwavelength focusing by a negative refractive index slab. 2003 , 82, 1503-1505	88
1970	Focusing of millimeter-wave radiation beyond the Abbe barrier. 2003 , 83, 4122-4124	14
1969	Disorder effects on the imaging of a negative refractive lens made by arrays of dielectric cylinders. 2003 , 94, 2173-2176	24

1968	Dynamics of causal beam refraction in negative refractive index materials. 2003 , 82, 2008-2010	34
1967	Comment on Electromagnetic resonances in individual and coupled split-ring resonators[J. Appl. Phys. 92, 2929 (2002)]. 2003 , 94, 2770-2770	3
1966	Evaluation of lensing in photonic crystal slabs exhibiting negative refraction. 2003 , 68,	133
1965	T-junction waveguide experiment to characterize left-handed properties of metamaterials. 2003 , 94, 3712-3716	17
1964	Optical transmission and reflection of perfect lenses by left handed materials. 2003 , 67,	37
1963	Phase conjugation and perfect lensing. 2003 , 94, 4241-4243	86
1962	Superprism phenomenon in three-dimensional macroporous polymer photonic crystals. 2003 , 67,	43
1961	Transmission measurements in wedge-shaped absorbing samples: an experiment for observing negative refraction. 2003 , 67, 067601	19
1960	A compact enhanced-bandwidth hybrid ring using a left-handed transmission line section.	9
1959	Backward-wave meta-materials-a brief review.	
1958	A broadband left-handed (LH) coupled-line backward coupler with arbitrary coupling level.	13
1957	The left-handed wave inside natural materials. 2003 ,	
1956	Backward wave region and negative material parameters of a structure formed by lattices of wires and split-ring resonators.	
1955	Anti-Shielding Effect and Negative Temperature in Instantaneously Reversed Electric Fields and Left-Handed Media. 2003 , 68, 87-97	6
1954	Novel light beam propagation through optical potential well2003, 63, 28-34	11
1953	Sub-wavelength focusing in loaded transmission line negative refractive index metamaterials.	2
1952	Reverted resonant "wakefield".	
1951	Direct evidence of negative refraction at media with negative ϵ and μ . 2003 , 5, L9-L11	11

1950	.	2
1949	Subwavelength focusing using a negative-refractive-index transmission line lens. 2003 , 2, 186-189	6
1948	Compact, linear, lead/lag phase shifters using negative refractive index metamaterials.	
1947	Electromagnetic Scattering by a Conducting Cylinder Coated with Metamaterials. 2003 , 42, 91-105	66
1946	On the Group Front and Group Velocity in a Dispersive Medium Upon Refraction From a Nondispersive Medium. 2004 , 126, 244-249	11
1945	Frequency-independent effective rest mass of photons in the two time derivative Lorentz material model. 2004 , 6, 239-245	3
1944	Behaviour of Hexagon Split Ring Resonators and Left-Handed Metamaterials. 2004 , 21, 1330-1332	33
1943	Transmission Characteristics of Smiling Pattern Resonators. 2004 , 43, L669-L672	2
1942	Geometrical optics in nonlinear media and integrable equations. 2004 , 37, L105-L111	8
1941	Fabrication of 1D and 2D vertical nanomagnetic resonators. 2004 , 22, 3327	4
1940	Millimeter wave microstrip array design with CRLH-TL as feeding line. 2004 ,	7
1939	Lifetime of an emitting dipole near various types of interfaces including magnetic and negative refractive materials. 2004 , 121, 11358-61	23
1938	Electromagnetic resonance in deformed split ring resonators of left-handed meta-materials. 2004 , 96, 1979-1982	16
1937	Electromagnetic field quantization in a linear isotropic permeable dielectric medium. 2004 , 70,	27
1936	Tunable transmission and bistability in left-handed band-gap structures. 2004 , 85, 1451-1453	59
1935	Physics of propagation in left-handed guided wave structures at microwave and millimeter-wave frequencies. 2004 , 92, 053901	25
1934	Optical properties of an ideal homogeneous causal left-handed material slab. 2004 , 70, 036605	29
1933	Negative Hartman effect in one-dimensional photonic crystals with negative refractive materials. 2004 , 70, 066624	14

1932	Photon tunneling in composite layers of negative- and positive-index media. 2004 , 70, 047603	22
1931	Superlensing effect in liquid surface waves. 2004 , 69, 030201	115
1930	Role of wave interaction of wires and split-ring resonators for the losses in a left-handed composite. 2004 , 70, 046607	14
1929	Finite-size effects of a left-handed material slab on the image quality. 2004 , 92, 107404	112
1928	Pokrovsky and Efros reply. 2004 , 92, 119401	6
1927	Metrics for negative-refractive-index materials. 2004 , 70, 035602	35
1926	Anomalous phase in one-dimensional, multilayer, periodic structures with birefringent materials. 2004 , 70,	10
1925	Image resolution of surface-plasmon-mediated near-field focusing with planar metal films in three dimensions using finite-linewidth dipole sources. 2004 , 69,	38
1924	Beam shifting experiment for the characterization of left-handed properties. 2004 , 95, 2238-2241	26
1923	Stability and quality factor of a one-dimensional subwavelength cavity resonator containing a left-handed material. 2004 , 69,	22
1922	Spectral negative refraction and focusing analysis of a two-dimensional left-handed photonic crystal lens. 2004 , 70,	60
1921	. 2004 , 52, 1167-1179	
1920	Peculiar radar cross-section properties of double-negative and single-negative metamaterials.	0
1919	Plane-wave diffraction at the periodically corrugated boundary of vacuum and a negative-phase-velocity material. 2004 , 69, 057602	18
1918	Wave fields measured inside a negative refractive index metamaterial. 2004 , 85, 4564-4566	29
1917	Electromagnetic scattering by spherical negative-refractive-index particles: Low-frequency resonance and localization parameters. 2004 , 69, 016619	14
1916	Defect modes and transmission properties of left-handed bandgap structures. 2004 , 70, 046615	26
1915	Refraction of electromagnetic energy for wave packets incident on a negative-index medium is always negative. 2004 , 69, 026604	27

1914	Negative-refraction-like behavior revealed by arrays of dielectric cylinders. 2004 , 70, 026608	14
1913	Long-range Babinet effect in complementary left-handed material with gold nanoparticles. 2004 , 84, 1982-1984	3
1912	Microwave solid-state left-handed material with a broad bandwidth and an ultralow loss. 2004 , 70,	60
1911	Causality in the propagation of transient electromagnetic waves in a left-handed medium. 2004 , 70,	7
1910	Accurate analysis of large-scale periodic structures using an efficient sub-entire-domain basis function method. 2004 , 52, 3078-3085	64
1909	Arrays of wirelike microstructures of Ag with visible wavelength transparent plasmonic response at near-ultraviolet and midinfrared regions. 2004 , 85, 1952-1954	2
1908	Enhancement of evanescent waves in waveguides using metamaterials of negative permittivity and permeability. 2004 , 84, 669-671	43
1907	Focusing inside negative index materials. 2004 , 85, 2472-2474	14
1906	Angle resolved microwave spectrometer for metamaterial studies. 2004 , 75, 820-825	6
1905	Codirectional coupler and power divider mixed microstrip and metamaterials with lumped-elements L-C.	1
1904	Optoelectronic Simulation of the Klein Paradox based on Negative Refraction Phenomenon. 2004 , 817, 106	
1903	Optical add/drop filters using two-dimensional photonic crystals. 2004 , 5279, 286	2
1902	Towards gravitationally assisted negative refraction of light by vacuum. 2004 , 37, L505-L510	31
1901	Refractive-index-sensitive, plasmon-resonant-scattering, and surface-enhanced Raman-scattering nanoparticles and arrays as biological sensing platforms. 2004 , 5327, 60	16
1900	Flux guiding in an aluminum honeycomb lattice observed through magnetic resonance imaging.	
1899	Physical and materials aspects of photonic crystals for microwaves and millimetre waves. 2004 , 95, 618-623	8
1898	Metamaterial bilayers for enhancement of wave transmission through a small hole in a flat perfectly conducting screen. 2004 ,	3
1897	Negative phase velocity in a uniformly moving, homogeneous, isotropic, dielectric-magnetic medium. 2004 , 37, 5697-5711	22

1896 Experimental verification of 2-D periodically loaded transmission line metamaterial.

1895 Photonic bandgap properties in stratified media consisting of complex artificial dielectric.

0

1894 NEGATIVE REFRACTION AND SUBWAVELENGTH FOCUSING USING PHOTONIC CRYSTALS. **2004**, 18, 1275-12914

1893 NANOSCALE OPTICAL PATTERNING USING EVANESCENT FIELDS AND SURFACE PLASMONS. **2004**, 03, 405-417

11

1892 Invited paper: Prospects for metamaterials. **2004**, 40, 972

4

1891 Anelastic instability in composites with negative stiffness inclusions. **2004**, 84, 803-810

16

1890 Panel-allocated defect SRRs effect in X-band LHMs. **2004**, 49, 2440

3

1889 Integrable Equations in Nonlinear Geometrical Optics. **2004**, 113, 325-352

13

1888 Anomalies of radiation absorption and superluminal propagation of light: I. An isotropic layer. **2004**, 96, 877-886

10

1887 Study of eigenmodes in periodic waveguides using the Lorentz reciprocity theorem. **2004**, 52, 542-553

15

1886 A compact enhanced-bandwidth hybrid ring using an artificial lumped-element left-handed transmission-line section. **2004**, 52, 798-804

146

1885 Metamaterial-based electronically controlled transmission-line structure as a novel leaky-wave antenna with tunable radiation angle and beamwidth. **2004**, 52, 2678-2690

177

1884 Diamagnetic properties of metamaterials: a magnetostatic analogy. **2004**, 41, 307-312

8

1883 Magnetic response of metamaterials at 100 terahertz. *Science*, **2004**, 306, 1351-3

33.3 1192

1882 Using solution-phase nanoparticles, surface-confined nanoparticle arrays and single nanoparticles as biological sensing platforms. **2004**, 14, 355-67

196

1881 How to realize a negative refractive index material at the atomic level in an optical frequency range?. **2004**, 5, 1322-6

35

1880 Linear and nonlinear wave propagation in negative refraction metamaterials. **2004**, 69,

259

1879 Metamaterials and negative refractive index. *Science*, **2004**, 305, 788-92

33.3 2893

1878	Wave packet propagation into a negative index medium. 2004 , 72, 1232-1240	7
1877	Metamaterial exhibiting left-handed properties over multiple frequency bands. 2004 , 96, 5338-5340	79
1876	Left-handed materials composed of only S-shaped resonators. 2004 , 70, 057605	285
1875	Lateral shift of the transmitted light beam through a left-handed slab. 2004 , 69, 066617	77
1874	Effective medium theory of left-handed materials. 2004 , 93, 107402	260
1873	Arbitrary dual-band components using composite right/left-handed transmission lines. 2004 , 52, 1142-1149	297
1872	Experimental study of composite medium with simultaneously negative permeability and permittivity. 2004 , 47, 64-78	2
1871	Panel-allocated defect SRRs effect in X-band LHMs. 2004 , 49, 2440-2442	5
1870	Theoretical investigation of negative refraction in metallic and ferromagnetic composites. 2004 , 9, 459-462	
1869	Quantifying energy condition violations in traversable wormholes. 2004 , 63, 859-864	71
1868	Possible existence of left-handed materials in metallic magnetic thin films. 2004 , 271, 180-183	18
1867	A unified view of propagating and localized surface plasmon resonance biosensors. 2004 , 379, 920-30	533
1866	Left-handed material use in monoatomic & III-V ICs. 2004 , 17, 26-27	0
1865	Exploitation of Localized Surface Plasmon Resonance. 2004 , 16, 1685-1706	2023
1864	Conjugation symmetry in linear electromagnetism in extension of materials with negative real permittivity and permeability scalars. 2004 , 40, 160-161	8
1863	Comparison of grating analysis techniques for SG-DBR lasers. 2004 , 40, 161-164	
1862	3D-FDTD-PML analysis of left-handed metamaterials. 2004 , 40, 201-205	33
1861	Proposed OCDMA encoders and decoders based on silica-on-silicon integrated optics. 2004 , 40, 205-209	1

1860	Infinite phase velocity as the boundary between positive and negative phase velocities. 2004 , 41, 165-166	11
1859	Novel antennas for ultra-wideband communications. 2004 , 41, 166-169	21
1858	Effect of losses and dispersion on the focusing properties of left-handed media. 2004 , 41, 290-294	26
1857	A new condition to identify isotropic dielectric-magnetic materials displaying negative phase velocity. 2004 , 41, 315-316	179
1856	A study of waveguides filled with anisotropic metamaterials. 2004 , 41, 426-431	20
1855	Group velocity, negative and ultra-high index of refraction in photonic band gap materials. 2004 , 42, 82-87	12
1854	Perturbative approach for diffraction due to a periodically corrugated boundary between vacuum and a negative phase-velocity material. 2004 , 233, 277-282	12
1853	A limitation of the Bruggeman formalism for homogenization. 2004 , 234, 35-42	58
1852	Extinction properties of a coated sphere containing a left-handed material. 2004 , 239, 25-31	9
1851	GHz magnetic response of split ring resonators. 2004 , 2, 155-159	19
1850	Physics and applications of photonic crystals. 2004 , 2, 87-95	31
1849	Dielectric photonic crystal as medium with negative electric permittivity and magnetic permeability. 2004 , 129, 643-647	48
1848	Magnetoimpedance in amorphous wires and multifunctional applications: from sensors to tunable artificial microwave materials. 2004 , 272-276, 1452-1459	45
1847	Optical bulk and surface waves with negative refraction. 2004 , 110, 167-173	24
1846	Study of lossy effects on the propagation of propagating and evanescent waves in left-handed materials. 2004 , 323, 484-494	39
1845	Left-handed material containing spherical and nonspherical metallic and magnetic particles. 2004 , 328, 225-231	6
1844	Isotropic metamaterial electromagnetic lens. 2004 , 331, 244-247	20
1843	Deflection of electromagnetic waves by photonic crystals made of arrays of dielectric cylinders. 2004 , 331, 342-347	

1842	Phase compensating effect in left-handed materials. 2004 , 332, 449-455	15
1841	Zero- photonic band gap in a quasiperiodic stacking of positive and negative refractive index materials. 2004 , 332, 461-468	53
1840	Backward waves in uniaxial materials and subwavelength waveguides formed by resonant scatterers.	
1839	Is the 3D-wire medium isotropic?. 2004 ,	
1838	Phase-agile branch-line couplers using metamaterial lines. 2004 , 14, 340-342	35
1837	Finite-difference and pseudospectral time-domain methods applied to backward-wave metamaterials. 2004 , 52, 2955-2962	32
1836	Experimental and theoretical study of magneto-inductive waves supported by one-dimensional arrays of Swiss rolls 2004 , 95, 4488-4493	48
1835	Photonic crystals with silver nanowires as a near-infrared superlens. 2004 , 85, 1520-1522	102
1834	Delay-time investigation of electromagnetic waves through homogeneous medium and photonic crystal left-handed materials. 2004 , 85, 1125-1127	9
1833	Small-size sonic crystals with strong attenuation bands in the audible frequency range. 2004 , 84, 3364-3366	155
1832	Performance of a negative index of refraction lens. 2004 , 84, 3232-3234	103
1831	Negative refraction of acoustic waves in two-dimensional phononic crystals. 2004 , 85, 341-343	357
1830	Perfectly matched layer behavior in negative refractive index materials. 2004 , 3, 172-175	47
1829	Electric coupling to the magnetic resonance of split ring resonators. 2004 , 84, 2943-2945	348
1828	Plane waves with negative phase velocity in Faraday chiral mediums. 2004 , 69, 026602	87
1827	Magneto-inductive waves supported by metamaterial elements: components for a one-dimensional waveguide. 2004 , 37, 362-367	66
1826	A new miniaturized annular ring patch resonator partially loaded by a metamaterial ring with negative permeability and permittivity. 2004 , 3, 19-22	45
1825	Fabrication and characterization of a negative-refractive-index composite metamaterial. 2004 , 70,	65

1824	Negative index metamaterial for selective angular separation of microwaves by polarization. 2004 ,	3
1823	Physics. Only skin deep. <i>Science</i> , 2004 , 305, 785-6	333 16
1822	Band structure and omnidirectional photonic band gap in lamellar structures with left-handed materials. 2004 , 69, 066613	81
1821	A novel directional coupler utilizing a left-handed material. 2004 , 16, 171-173	34
1820	Toward creating isotropic microwave composites with negative refraction. 2004 , 39, n/a-n/a	17
1819	Lumped element models of double negative metamaterial-based transmission lines. 2004 , 39, n/a-n/a	8
1818	Propagating behavior of rectangular waveguide loaded with dissipative magnetic slab by using new algorithm. 2004 , 39, n/a-n/a	0
1817	Nonlinear transmission lines in left-handed media.	2
1816	Robust method to retrieve the constitutive effective parameters of metamaterials. 2004 , 70, 016608	1251
1815	Double-negative acoustic metamaterial. 2004 , 70, 055602	700
1814	Negative-refractive-index transmission-line metamaterials and enabling electromagnetic applications. 2004 ,	34
1813	Transmission line approach of left-handed (LH) materials and microstrip implementation of an artificial LH transmission line. 2004 , 52, 1159-1166	311
1812	Properties of one-dimensional photonic crystals containing single-negative materials. 2004 , 69, 066607	228
1811	Omnidirectional gap and defect mode of one-dimensional photonic crystals with single-negative materials. 2004 , 70,	204
1810	Partial focusing of radiation by a slab of indefinite media. 2004 , 84, 2244-2246	174
1809	Array factor approach of leaky-wave antennas and application to 1-D/2-D composite right/left-handed (CRLH) structures. 2004 , 14, 274-276	74
1808	Brinkov radiation in a causal permeable medium. 2004 , 70,	9
1807	Waveguiding in air by total external reflection from ultralow index metamaterials. 2004 , 85, 1-3	61

1806	Optical transmission of photonic crystal structures formed by dielectric cylinders: evidence for non-negative refraction. 2004 , 70, 056608	24
1805	Image resolution depending on slab thickness and object distance in a two-dimensional photonic-crystal-based superlens. 2004 , 70,	63
1804	Absolute negative refraction and imaging of unpolarized electromagnetic waves by two-dimensional photonic crystals. 2004 , 70,	55
1803	Directed diffraction without negative refraction. 2004 , 70,	32
1802	Near-infrared photonic band gaps and nonlinear effects in negative magnetic metamaterials. 2004 , 69,	147
1801	Bright and dark gap solitons in a negative index Fabry-Pérot etalon. 2004 , 93, 213902	62
1800	Electromagnetic scattering by optically anisotropic magnetic particle. 2004 , 69, 056614	58
1799	Analytical solution of the almost-perfect-lens problem. 2004 , 84, 1290-1292	135
1798	Split-ring resonators and localized modes. 2004 , 70,	93
1797	Experimental confirmation of negative refractive index of a metamaterial composed of split metallic patterns. 2004 , 84, 1537-1539	189
1796	Influence of the surface termination to the point imaging by a photonic crystal slab with negative refraction. 2004 , 85, 4269	85
1795	. 2004 , 52, 199-210	180
1794	Relativistic electron energy loss and induced radiation emission in two-dimensional metallic photonic crystals. I. Formalism and surface plasmon polariton. 2004 , 69,	20
1793	Overcoming the diffraction limit with a planar left-handed transmission-line lens. 2004 , 92, 117403	564
1792	Design of left-handed materials with broad bandwidth and low loss using double resonant frequency structure. 2004 ,	0
1791	Fields, Networks, Computational Methods, and Systems in Modern Electrodynamics. 2004 ,	
1790	Negative refraction. 2004 , 45, 191-202	357
1789	Three-wave coupling of microwaves in metamaterial with nonlinear resonant conductive elements. 2004 , 70, 066601	42

1788	Tuning of a nonlinear metamaterial band gap by an external magnetic field. 2004 , 70,	43
1787	Microwave photonic crystal with tailor-made negative refractive index. 2004 , 85, 1858-1860	23
1786	Double Split-Ring Resonators: Analytical Modeling and Numerical Simulations. 2004 , 24, 317-338	84
1785	Negative refraction and omnidirectional total transmission at a planar interface associated with a uniaxial medium. 2004 , 69,	45
1784	Characteristics of waves guided by a grounded "left-handed" material slab of finite extent. 2004 , 70, 066606	11
1783	Perfect lenses made with left-handed materials: Alice's mirror?. 2004 , 21, 122-31	74
1782	Problem of image superresolution with a negative-refractive-index slab. 2004 , 21, 491-8	36
1781	Scattering properties of an impedance-matched, ideal, homogeneous, causal "left-handed" sphere. 2004 , 21, 2311-9	13
1780	Negative refraction in indefinite media. 2004 , 21, 1032	209
1779	Slab lens with restrained light propagation in periodic multilayer. 2004 , 21, 1280	5
1778	Transmission study of prisms and slabs of lossy negative index media. 2004 , 12, 2081-95	32
1777	Superfocusing of light below the diffraction limit by photonic crystals with negative refraction. 2004 , 12, 6491-7	15
1776	Leaky-waves in a metamaterial-based two-dimensional structure for a conical beam antenna application.	14
1775	Goos-Hänchen shifts at the interfaces between left- and right-handed media. 2004 , 29, 872-4	87
1774	Three-dimensional photonic crystal of negative refraction achieved by interference lithography. 2004 , 29, 2542-4	32
1773	Experimental observation of true left-handed transmission peaks in metamaterials. 2004 , 29, 2623-5	138
1772	Subwavelength focusing and imaging by a multimode optical waveguide. 2004 , 29, 2864-6	5
1771	Composite right/left-handed transmission line metamaterials. 2004 , 5, 34-50	715

1770	Time domain TLM modelling of metamaterials with negative refractive index.	3
1769	A novel mixed conventional microstrip and composite right/left-handed backward-wave directional coupler with broadband and tight coupling characteristics. 2004 , 14, 31-33	68
1768	Spherical perfect lens: Solutions of Maxwell's equations for spherical geometry. 2004 , 69,	48
1767	Negative refraction at infrared wavelengths in a two-dimensional photonic crystal. 2004 , 93, 073902	260
1766	Negative refraction and left-handed electromagnetism in microwave photonic crystals. 2004 , 92, 127401	251
1765	Focusing properties of a photonic crystal slab with negative refraction. 2004 , 70,	62
1764	Time-domain electromagnetic energy in a frequency-dispersive left-handed medium. 2004 , 70,	66
1763	Subluminal to superluminal propagation in a left-handed medium. 2004 , 69,	35
1762	Planewave diffraction by gratings made of isotropic negative phase velocity materials. 2004 ,	
1761	Enhanced transmission through the subwavelength magnetic slits. 2004 ,	
1760	Homogenization giving rise to unusual metamaterials. 2004 ,	2
1759	Waveguiding light in air with ultralow index metamaterials. 2004 ,	
1758	Ultrarefraction and negative refraction in metamaterials. 2004 ,	3
1757	Anomalous phase in one-dimensional multilayer periodical structures with birefringent materials. 2004 ,	
1756	Realization of quasi uniform left-handed medium based on LH transmission line. 2004 ,	3
1755	Dispersion analysis of resonance cone behaviour in magnetically anisotropic transmission-line metamaterials. 2004 ,	5
1754	Novel optical phenomena with photonic crystals. 2004 ,	3
1753	Reversing Light With Negative Refraction. 2004 , 57, 37-43	297

1752 Enabling electromagnetic applications of negative-refractive-index transmission-line metamaterials part I. **2004**,

1751 An advanced method based on FDTD to extract the indices of composite meta-material.

1750 Negative refraction in periodic and random photonic crystals. **2005**, 7, 159-159

31

1749 Thickness dependence of negative refraction in photonic crystals. **2005**,

1748 The microwave behavior of an anisotropic negative index medium. **2005**,

1

1747 Novel planar negative refractive index metamaterials.

1746 Electromagnetic structures containing negative refractive index metamaterials.

2

1745 Negative permeability of split ring resonator in the optical frequency region. **2005**,

1744 Comparison of simulation and measurement for 1-D metamaterial devices. **2005**,

1743 Negative refraction in semiconductor photonic crystals. **2005**,

1742 A theoretical study of surface polaritons in asymmetric left-handed slab waveguides. **2005**,

1741 Metamaterials: composite materials with unnatural electromagnetic properties. **2005**,

1740 Optical transmission properties of Bragg microcavity containing left handed materials. **2005**,

1739 A 3-D negative-refractive-index transmission-line medium.

1738 Spatial dissipative structures in a Fabry-Perot cavity with a negative refractive index. **2005**,

1

1737 Electromagnetic wave propagation through aperiodic superlattices composed of left- and right-handed materials. **2005**,

1736 Dispersion Engineering: The Use of Abnormal Velocities and Negative Index of Refraction to Control Dispersive Effects. **2005**, 381-411

2

1735 Planar Anisotropic Resonance-Cone Metamaterials. **2005**, 249-267

1

1734	Sub-diffraction imaging with compensating bilayers. 2005 , 7, 162-162	42
1733	A two-dimensional uniplanar transmission-line metamaterial with a negative index of refraction. 2005 , 7, 163-163	30
1732	Negative phase velocity in a material with simultaneous mirror-conjugated and racemic chirality characteristics. 2005 , 7, 165-165	5
1731	Reducing losses and dispersion effects in multilayer metamaterial tunnelling devices. 2005 , 7, 166-166	17
1730	The challenge of homogenization in metamaterials. 2005 , 7, 167-167	33
1729	Design, fabrication, and characterization of engineered materials in the microwave and millimeter wave regime.	
1728	Electromagnetic negative-phase-velocity propagation in the ergosphere of a rotating black hole. 2005 , 7, 171-171	20
1727	Numerical study and parameter estimation for double-negative metamaterials with Hilbert-curve inclusions.	7
1726	Negative permittivity and permeability in the infrared due to dielectric spheres. 2005 , 5971, 252	
1725	Scattering Matrix Method Applied to Photonic Crystals. 2005 ,	1
1724	Equivalent material parameter extraction of double strip loaded waveguide. 2005 , 2, 165-169	2
1723	Negative refractive index of layered nonmagnetic/magnetic composites. 2005 , 285, 155-163	5
1722	Collective optical behavior in complementary wire arrays with Au nanoparticles. 2005 , 77, 277-284	1
1721	Left handed composite materials in the optical range. 2005 , 36, 564-566	4
1720	Negative refraction at the interface of uniaxial anisotropic media. 2005 , 246, 429-435	32
1719	Amphoteric refraction at the interface between isotropic and anisotropic media. 2005 , 254, 353-360	29
1718	Sub-wavelength imaging with a left-handed material flat lens. 2005 , 334, 326-330	43
1717	Effective negative refractive index of graded granular composites with metallic magnetic particles. 2005 , 334, 422-428	21

1716	Lossy and retardation effects on the localization of EM waves using a left-handed medium slab. 2005 , 336, 235-244	11
1715	Enhanced diffraction by a rectangular grating made of a negative phase-velocity (or negative index) material. 2005 , 337, 155-160	14
1714	Active lens realized by two-dimensional photonic crystal. 2005 , 337, 457-462	2
1713	The tunable negative refractive index in granular composite. 2005 , 339, 123-130	
1712	Trough and hump phenomenon in a kind of random system. 2005 , 339, 159-163	1
1711	Solitons and decoherence in left-handed metamaterials. 2005 , 341, 231-234	29
1710	Electromagnetic field energy density in artificial microwave materials with strong dispersion and loss. 2005 , 343, 231-237	46
1709	Optical refractive index of massive particles and physical meanings of left-handed media. 2005 , 344, 144-148	15
1708	Defect effect of split ring resonators in left-handed metamaterials. 2005 , 346, 87-91	45
1707	Omnidirectional reflection from one-dimensional quasi-periodic photonic crystal containing left-handed material. 2005 , 345, 459-468	16
1706	Electromagnetic properties of a left-handed medium slab excited by three-dimensional electric dipoles. 2005 , 345, 439-447	6
1705	Polarization beam splitting in two-dimensional photonic crystals based on negative refraction. 2005 , 346, 243-247	14
1704	FDTD study of subwavelength imaging by a photonic crystal slab. 2005 , 3, 19-24	9
1703	Guided optical modes in asymmetric left-handed waveguides. 2005 , 245, 125-135	46
1702	Characteristics of band structures in 1D photonic crystals containing alternate left-right handed materials. 2005 , 136, 495-498	7
1701	Metamaterials: from microwaves to the visible region. 2005 , 6, 693-701	4
1700	Magneto-optical effect of left-handed material. 2005 , 45, 347-353	8
1699	Positive and negative refraction of magnetoinductive waves in two dimensions. 2005 , 46, 301-308	28

1698	Negative phase velocity of electromagnetic waves and the cosmological constant. 2005 , 41, 1-4	14
1697	Electromagnetic parameter retrieval from inhomogeneous metamaterials. 2005 , 71, 036617	1748
1696	Magnetic metamaterials at telecommunication and visible frequencies. 2005 , 95, 203901	590
1695	Three-dimensional array of dielectric spheres with an isotropic negative permeability at infrared frequencies. 2005 , 72,	170
1694	FDTD study of resonance Processes in metamaterials. 2005 , 53, 1477-1487	53
1693	Experimental demonstration of near-infrared negative-index metamaterials. 2005 , 95, 137404	944
1692	Equivalent-circuit models for split-ring resonators and complementary split-ring resonators coupled to planar transmission lines. 2005 , 53, 1451-1461	966
1691	Superlens based on metal-dielectric composites. 2005 , 72,	115
1690	Fabrication and optical measurements of nanoscale meta-materials: terahertz and beyond.	0
1689	Retrieval of the effective constitutive parameters of bianisotropic metamaterials. 2005 , 71, 046610	182
1688	Negative refraction of a combined double S-shaped metamaterial. 2005 , 86, 151909	84
1687	Sub-diffraction-limited optical imaging with a silver superlens. <i>Science</i> , 2005 , 308, 534-7	33.3 2990
1686	Fedorov lateral shift at the interface between left-handed and right-handed media. 2005 , 99, 793	1
1685	Nanofabricated media with negative permeability at visible frequencies. 2005 , 438, 335-8	487
1684	Periodically loaded dipole array supporting left-handed propagation. 2005 , 152, 251	5
1683	Effective medium approach of left-handed material using a dispersive FDTD method. 2005 , 41, 1484-1487	14
1682	Nonlinear wave propagation phenomena in left-handed transmission-line media. 2005 , 53, 238-245	58
1681	Metamaterial-based electronically controlled transmission-line structure as a novel leaky-wave antenna with tunable radiation angle and beamwidth. 2005 , 53, 161-173	137

1680	Properties of left-handed metamaterials: transmission, backward phase, negative refraction, and focusing. 2005 , 53, 2956-2967	35
1679	. 2005 , 53, 3298-3304	60
1678	Focused-Ion-Beam Nanofabrication of Near-Infrared Magnetic Metamaterials. 2005 , 17, 2547-2549	106
1677	Imaging by photonic crystal without negative refraction. 2005 , 2, 502-505	2
1676	Study of the effect of dielectric split-ring resonators on microstrip-line transmission. 2005 , 44, 445-448	10
1675	Effect of poles on subwavelength focusing by an LHM slab. 2005 , 45, 49-53	6
1674	Analysis of vertical monopoles in a grounded substrate using the discrete real-images method. 2005 , 45, 53-55	
1673	Plane waves with negative phase velocity in isotropic chiral mediums. 2005 , 45, 120-121	51
1672	Simulation, fabrication and testing of a left-handed microstrip coupler. 2005 , 45, 255-258	4
1671	Calculation of the dispersion diagrams of LHM using the 3D FDTD method. 2005 , 45, 394-397	5
1670	Negative-refraction phenomenon at multiple frequency bands from electromagnetic crystals. 2005 , 45, 465-469	4
1669	Doppler effects in a left-handed material: A first-principles theoretical study. 2005 , 47, 76-79	1
1668	Novel propagation features of double negative H-guides and H-guide couplers. 2005 , 47, 185-190	8
1667	Directive electromagnetic radiation of a line source scattered by a conducting cylinder coated with left-handed metamaterial. 2005 , 47, 274-279	16
1666	Negative phase velocity in isotropic dielectric-magnetic media via homogenization. 2005 , 47, 313-315	9
1665	Volterra series usefulness in modelling of the time-domain cross-talk phenomena in coupled microstrip lines with nonlinear termination. 2005 , 47, 315-318	0
1664	Experimental study of transmission enhancement of evanescent waves through silver films assisted by surface plasmon excitation. 2005 , 80, 1315-1325	13
1663	Negative refraction in two-dimensional photonic crystals. 2005 , 80, 1231-1236	3

1662 Amphoteric-like refraction in a two-dimensional photonic crystal. **2005**, 81, 301-304

1661 Negative refraction of ultra-short electromagnetic pulses. **2005**, 81, 393-402

23

1660 Some remarks regarding electrodynamics of materials with negative refraction. **2005**, 81, 403-407

18

1659 Compact-2D FDTD for waveguides including materials with negative dielectric permittivity, magnetic permeability and refractive index. **2005**, 81, 607-613

17

1658 The group indices of refraction and the group velocities of the e-ray and the o-ray waves in Quartz. **2005**, 66, 1252-1255

2

1657 Diffraction gratings of isotropic negative-phase velocity materials. **2005**, 116, 31-43

12

1656 Reflection and phase of left-handed metamaterials at microwave frequencies. **2005**, 50, 396-399

1

1655 Properties of defect mode and optical enhancement of 1D photonic crystals with a defect layer of negative refractive index material. **2005**, 1, 198-200

1654 Transmission spectra of one-dimensional photonic crystals including negative-refractive-index media. **2005**, 1, 201-204

2

1653 Photonic bandgap properties of one-dimensional photonic crystal consisting of complex artificial media. **2005**, 10, 534-538

1

1652 Design of photonic crystal superlens with improved image resolution. **2005**, 37, 575-586

4

1651 COMPLEX GUIDED WAVE SOLUTION OF GROUNDED DIELECTRIC SLAB MADE OF METAMATERIALS. **2005**, 51, 187-195

17

1650 MAGNETIC PROPERTIES OF S-SHAPED SPLIT-RING RESONATORS. **2005**, 51, 231-247

58

1649 ANOMALOUS PROPERTIES OF SCATTERING FROM CAVITIES PARTIALLY LOADED WITH DOUBLE-NEGATIVE OR SINGLE-NEGATIVE METAMATERIALS. **2005**, 51, 49-63

19

1648 . **2005**,

551

1647 References. **2005**, 635-688

1646 THE EXPERIMENTAL STUDY OF $\lambda/4$ MONOPOLE ANTENNAS IN META-MATERIAL. **2005**, 51, 281-293

9

1645 EXPERIMENTAL STUDY ON SEVERAL LEFT-HANDED MATAMATERIALS. **2005**, 51, 249-279

71

1644	A STUDY OF USING METAMATERIALS AS ANTENNA SUBSTRATE TO ENHANCE GAIN. 2005 , 51, 295-328	179
1643	REFLECTION COEFFICIENTS AND GOOS-HANCHEN SHIFTS IN ANISOTROPIC AND BIANISOTROPIC LEFT-HANDED METAMATERIALS. 2005 , 51, 83-113	64
1642	Reflection and refraction of light at the interface of a uniaxial bicrystal. 2005 , 72, 830-836	6
1641	Terahertz left handed electromagnetic media. 2005 ,	
1640	Zero-permeability materials: an artifact of losses in LHM left-handed media. 2005 , 152, 465	2
1639	Reflection and phase of left-handed metamaterials at microwave frequencies. 2005 , 50, 395	6
1638	Goos-Hanchen Shifts via Composite Layers of Negative- and Positive-Index Media. 2005 , 44, 6295-6296	1
1637	Plane-wave diffraction at a grating composed of left-handed materials. 2005 ,	
1636	Composites with Inclusions of Negative Bulk Modulus: Extreme Damping and Negative Poisson's Ratio. 2005 , 39, 1645-1657	81
1635	Einstein at a distance. 2005 , 26, S135-S140	2
1634	Large-area, infrared nanophotonic materials fabricated using interferometric lithography. 2005 , 23, 2700	22
1633	Design and testing of different metamaterial structures.	
1632	Imaging through planar silver lenses in the optical near field. 2005 , 7, S176-S183	53
1631	Photon tunnelling in one-dimensional metamaterial photonic crystals. 2005 , 7, 519-524	6
1630	A Photonic Bandgap Filter Using Metallic Hilbert Curves. 2005 , 22, 1439-1442	
1629	Anomalous Positive Refraction in an Anisotropic Left-Handed Medium. 2005 , 22, 2069-2072	0
1628	Experimental realization of breaking diffraction limit by planar negative-index metamaterials in free space. 2005 , 69, 544-548	11
1627	Electromagnetic waves with negative phase velocity in Schwarzschild-de Sitter spacetime. 2005 , 71, 925-931	15

1626	Control of planar nonlinear guided waves and spatial solitons with a left-handed medium. 2005 , 7, S57-S67	31
1625	Left-handed electromagnetism obtained via nanostructured metamaterials: comparison with that from microstructured photonic crystals. 2005 , 7, S3-S11	15
1624	Multi-Imaging by Photonic Crystal Slab Using Negative Refraction. 2005 , 22, 949-951	26
1623	Imaging by Photonic Crystal Using Reflection and Negative Refraction. 2005 , 22, 2674-2676	4
1622	Verification and Calculation of Negative Refractive Indices of a Meta-Material by Numerical Method. 2005 , 22, 2073-2076	1
1621	Band gaps from ring resonators and structural periodicity. 2005 , 38, 590-595	5
1620	Effects of Substrates with Different Dielectric Parameters on Left-Handed Frequency of Left-Handed Materials. 2005 , 22, 1243-1245	10
1619	Inversion of critical angle and Brewster angle in anisotropic left-handed metamaterials. 2005 , 86, 251909	35
1618	Creating all-angle negative refraction by using insertion. 2005 , 86, 121103	32
1617	Analysis and design of Superconducting left-handed transmission lines. 2005 , 15, 996-999	21
1616	Superprism phenomena in polymeric woodpile structures. 2005 , 98, 123101	4
1615	Tunable non-near-field focus and imaging of an unpolarized electromagnetic wave. 2005 , 71,	19
1614	Subwavelength imaging by a flat cylindrical lens using optimized negative refraction. 2005 , 87, 091907	17
1613	Response to "Comment on "Submicron imaging with a planar silver lens" [Appl. Phys. Lett. 86, 126101 (2005)]. 2005 , 86, 126102	1
1612	Imaging properties of an elliptical-rod photonic-crystal slab lens. 2005 , 72,	27
1611	An isotropic three-dimensional negative-refractive-index transmission-line metamaterial. 2005 , 98, 043106	75
1610	Electromagnetic metamaterial with built-in microstructures. 2005 , 72,	4
1609	Electromagnetic wave transmission through subwavelength metallic meshes sandwiched between split rings. 2005 , 87, 201114	14

1608	Negative refraction: An intrinsic property of uniaxial crystals. 2005 , 72,	33
1607	Slab lenses from simple anisotropic media. 2005 , 72,	34
1606	Electromagnetic wave propagation in anisotropic metamaterials created by a set of periodic inductor-capacitor circuit networks. 2005 , 72,	20
1605	Tunable negative refraction in a two-dimensional active magneto-optical photonic crystal. 2005 , 71,	19
1604	Subwavelength far-field resolution in a square two-dimensional photonic crystal. 2005 , 71, 037601	22
1603	Subwavelength metallic waveguides loaded by uniaxial resonant scatterers. 2005 , 72, 036618	52
1602	Enhancement of specific absorption rate in lossy dielectric objects using a slab of left-handed material. 2005 , 72, 061911	6
1601	Effects of disorder on subwavelength lensing in two-dimensional photonic crystal slabs. 2005 , 71,	24
1600	On the resonances and polarizabilities of split ring resonators. 2005 , 98, 033103	98
1599	Coupling of electromagnetic waves and superlattice vibrations in a piezomagnetic superlattice: Creation of a polariton through the piezomagnetic effect. 2005 , 71,	17
1598	Localization of electromagnetic energy using a left-handed-medium slab. 2005 , 71,	50
1597	Observation of negative refraction and negative phase velocity in left-handed metamaterials. 2005 , 86, 124102	84
1596	High-directivity and high-power emission of a line source through conducting gratings backed with a slab of left-handed material. 2005 , 72,	4
1595	Multifocal flat lens with left-handed metamaterial. 2005 , 86, 021113	14
1594	Effective negative refraction index in periodic metal-ferrite-metal film composite. 2005 , 97, 076105	38
1593	High-power generation and transmission through a left-handed material. 2005 , 72,	16
1592	Slow microwaves in left-handed materials. 2005 , 72,	13
1591	A compact equivalent circuit model for the SRR structure in metamaterials.	2

1590	Experimental confirmation of negative phase change in negative index material planar samples. 2005 , 86, 241908	4
1589	Numerical simulations of negative-index refraction in wedge-shaped metamaterials. 2005 , 72, 016607	44
1588	Negative Refraction and Imaging Using 12-fold-Symmetry Quasicrystals. 2005 , 94,	93
1587	Exact solution to line source scattering by an ideal left-handed wedge. 2005 , 72, 056606	8
1586	Self-collimation in liquid surface waves propagating over a bottom with periodically drilled holes. 2005 , 71, 036301	26
1585	Time domain models of negative refractive index metamaterials.	
1584	Focusing properties of a rectangular-rod photonic-crystal slab. 2005 , 98, 063102	16
1583	Theory of mesoscopic magnetism in photonic crystals. 2005 , 94, 183902	60
1582	Pulse propagation, dispersion, and energy in magnetic materials. 2005 , 72, 066601	7
1581	Negative refraction at optical frequencies in nonmagnetic two-component molecular media. 2005 , 95, 067402	54
1580	Electromagnetic wave localization using a left-handed transmission-line superlens. 2005 , 72,	18
1579	Surface polaritons on left-handed cylinders: A complex angular momentum analysis. 2005 , 72,	16
1578	Propagation of resonance cones in truncated hyperbolic transmission-line grids over ground. 2005 ,	2
1577	Broadband omnidirectional reflection from negative index materials. 2005 , 87, 261921	18
1576	. 2005 , 53, 1522-1526	20
1575	Far-field imaging of acoustic waves by a two-dimensional sonic crystal. 2005 , 71,	109
1574	Subwavelength imaging with opaque nonlinear left-handed lenses. 2005 , 87, 091104	44
1573	. 2005 , 53, 3673-3683	25

1572	Electromagnetic interactions between a line source and anisotropic biaxial media with partially negative constitutive parameters. 2005 , 98, 074903	3
1571	Large positive and negative Goos-Hänchen shifts from a weakly absorbing left-handed slab. 2005 , 98, 043522	48
1570	Miniaturization of metamaterials-based waveguide structures. 2005 ,	
1569	Terahertz transmission through ensembles of subwavelength-size metallic particles. 2005 , 72,	22
1568	Beam shifting of an anisotropic negative refractive medium. 2005 , 71, 066612	17
1567	Low-loss left-handed materials using metallic magnetic cylinders. 2005 , 71, 046611	9
1566	TE and TM guided modes in an air waveguide with negative-index-material cladding. 2005 , 71, 046603	23
1565	Negative magnetic permeability in the visible light region. 2005 , 95, 237401	131
1564	Left-handed and right-handed metamaterials composed of split ring resonators and strip wires. 2005 , 71, 066605	12
1563	An Overview of Salient Properties of Planar Guided-Wave Structures with Double-Negative (DNG) and Single-Negative (SNG) Layers. 2005 , 339-380	15
1562	Gravitation and electromagnetic wave propagation with negative phase velocity. 2005 , 7, 75-75	36
1561	TOTAL AND NEGATIVE REFRACTION OF ELECTROMAGNETIC WAVES. 2005 , 19, 21-33	16
1560	REVERSAL OF INTERFERENCE IN LEFT HANDED MEDIUM. 2005 , 14, 245-257	1
1559	Tunable asymmetric composite right-/left-handed transmission line directional coupler controlled by applied voltage.	1
1558	COMPARISONS OF NEGATIVE REFRACTION IN LEFT-HANDED MATERIALS AND PHOTONIC CRYSTALS. 2005 , 19, 3547-3561	1
1557	Existence of complex modes in gratings composed of left-handed materials.	0
1556	Two-dimensional bandgap in one-dimensional negative-index periodic structures.	
1555	Metamaterial Grounded Planar Bilayers Supporting Leaky Waves: Principles and Applications. 2005 ,	

1554	Classical wave localization and spectral gap materials. 2005 , 220,	9
1553	On the physical origins of the negative index of refraction. 2005 , 7, 213-213	15
1552	Omnidirectional Gaps of One-Dimensional Photonic Crystals Containing Single-Negative Materials. 2005 , 22, 884-886	13
1551	Realization of arbitrary dual-band components using an improved CRLH transmission-line model.	
1550	Signal explanation to the dispersion of left-handed materials.	
1549	Two Dimensional Periodic Approach for the Study of Left-Handed Metamaterials. 2005 ,	
1548	Birefringent left-handed metamaterials and perfect lenses for vectorial fields. 2005 , 7, 220-220	19
1547	Microwave composite right/left-handed metamaterials and devices.	3
1546	Angular tracking of 3D scattering center using an optical flow algorithm.	3
1545	Negative refractive index in a right-handed medium.	
1544	A super compact multilayer broadband left-handed metamaterials for RF/MMIC applications.	3
1543	Unusual mode propagation characteristics of negative index slab waveguides.	1
1542	Patch antennas partially loaded with a dispersive backward-wave material.	
1541	Modeling of metamaterials with negative refractive index using 2-D shunt and 3-D SCN TLM networks. 2005 , 53, 1496-1505	29
1540	Interactions between electromagnetic waves and elliptically shaped metamaterials. 2005 , 4, 165-168	6
1539	Negative refraction in ferromagnet-superconductor superlattices. 2005 , 95, 247009	116
1538	A positive future for double-negative metamaterials. 2005 , 53, 1535-1556	260
1537	Experimental analysis of true left-handed behaviour and transmission properties of composite metamaterials. 2005 , 3, 75-78	6

1536	Biological applications of localised surface plasmonic phenomenae. 2005 , 152, 13-32	218
1535	Impact of inherent periodic structure on effective medium description of left-handed and related metamaterials. 2005 , 71,	219
1534	Photonic crystal waveguide analysis using interface boundary conditions. 2005 , 41, 461-467	13
1533	Improved superlensing in two-dimensional photonic crystals with a basis. 2005 , 86, 061105	20
1532	Three-dimensional isotropic meta-materials.	4
1531	Simulation of negative permittivity and negative permeability by means of evanescent waveguide Modes-theory and experiment. 2005 , 53, 1506-1514	80
1530	Negative refraction and subwavelength lensing in a polaritonic crystal. 2005 , 71,	30
1529	Effect of interface and disorder on the far-field image in a two-dimensional photonic-crystal-based flat lens. 2005 , 71,	26
1528	Negative refraction and superlens behavior in a two-dimensional photonic crystal. 2005 , 71,	112
1527	Coupling between plane waves and Bloch waves in photonic crystals with negative refraction. 2005 , 71,	38
1526	Fast algorithms for large-scale periodic structures using subentire domain basis functions. 2005 , 53, 1154-1162	30
1525	Efficient modeling of novel uniplanar left-handed metamaterials. 2005 , 53, 1462-1468	21
1524	Negative refraction of acoustic waves in two-dimensional sonic crystals. 2005 , 72,	76
1523	Effective plasma frequency in one-dimensional metallic-dielectric photonic crystals. 2005 , 86, 091112	44
1522	Boosting numerical accuracy in calculation of polarizability of two-dimensional scatterers. 2005 , 47, 60-65	3
1521	Strong effect of surfaces on resolution limit of negative-index Superlens□ 2005 , 87, 103507	11
1520	Negative Refraction in the IR and Visible Frequencies. 2005 ,	
1519	Directive electromagnetic scattering by an infinite conducting cylinder coated with left-handed material.	

1518	Microwave/millimeter wave metamaterial development using the design of experiments technique.	
1517	Superresolution effects obtained by negative refraction lens. 2005 , 52, 1871-1883	4
1516	Role of evanescent waves in the positive and negative Goos-Hänchen shifts with left-handed material slabs. 2005 , 98, 094905	10
1515	Practical limitations of subwavelength resolution using negative-refractive-index transmission-line lenses. 2005 , 53, 3201-3209	23
1514	Linear and Nonlinear Homogenized Composite Mediums as Metamaterials. 2005 , 25, 461-481	30
1513	Amplifying left-handed transmission line media.	2
1512	Measured Polarization Response of Negative Index Metamaterial. 2005 ,	1
1511	Compact leaky-wave components using metamaterial bilayers. 2005 ,	9
1510	Gap solitons in microstructured metamaterials.	
1509	Microwave composite right/left-handed metamaterials and devices.	
1508	Guest Editorial. 2005 , 53, 1413-1417	9
1507	Towards Left-handed Metamaterials at Optical Frequencies.	2
1506	Growing evanescent waves in continuous transmission-line grid media. 2005 , 15, 131-133	5
1505	Left-Handed Metamaterials Studies and their Application to Accelerator Physics.	1
1504	Resonant properties of dielectric metamaterials.	0
1503	The research of an improved way of LHM realization-a renewed transmission line CRLH structure.	
1502	Analysis and Design of Waveguides Loaded with Split-Ring Resonators. 2005 , 19, 1407-1421	10
1501	Efficient integral-equation-based method for accurate analysis of scattering from periodically arranged nanostructures. 2005 , 72, 056702	16

1500	Solution-phase, triangular ag nanotriangles fabricated by nanosphere lithography. 2005 , 109, 11158-62	99
1499	Optical behaviors studying in nano-scale left-handed meta-material patterns.	
1498	Higher harmonic generation and parametric instabilities in left-handed nonlinear transmission lines.	
1497	Transmission of evanescent wave modes through a slab of DNG material. 2005 , 53, 270-274	7
1496	Realization of optical superlens imaging below the diffraction limit. 2005 , 7, 255-255	78
1495	Free space measurements of negative refraction with varying angles of incidence. 2005 , 15, 567-569	7
1494	Negative-refraction imaging with two-dimensional phononic crystals. 2005 , 72,	122
1493	CoMetAs: Design of Conformal Omnidirectional Metamaterial Antennas. 2005 ,	2
1492	A broadband balun using metamaterial phase-shifting lines.	
1491	Introduction. 2005 , 1-26	2
1490	The Future of MTMs. 2005 , 316-346	1
1489	Piezoelectricpiezomagnetic multilayer with simultaneously negative permeability and permittivity. 2005 , 86, 102904	10
1488	Polarizabilities and effective parameters for collections of spherical nanoparticles formed by pairs of concentric double-negative, single-negative, and double-positive metamaterial layers. 2005 , 97, 094310	159
1487	Optically uniaxial left-handed materials. 2005 , 72,	19
1486	A broadband 1:4 series power divider using metamaterial phase-shifting lines. 2005 ,	1
1485	Suppression of spontaneous emission and superradiance over macroscopic distances in media with negative refraction. 2005 , 71,	60
1484	Multiple-spot parallel processing for laser micronanofabrication. 2005 , 86, 044102	190
1483	Superconducting metamaterials. 2005 , 87, 034102	137

1482	Tunable negative refractions in two-dimensional photonic crystals with superconductor constituents. 2005 , 97, 073104	34
1481	Isotropic three-dimensional left-handed metamaterials. 2005 , 71,	105
1480	Brewster angle with a negative-index material. 2005 , 44, 3716-24	17
1479	Fabrication trends for free-space microoptics. 2005 , 23, 633-646	18
1478	Study of the surface and bulk polaritons with a negative index metamaterial. 2005 , 22, 1016	75
1477	Ultra-narrow bright spatial solitons interacting with left-handed surfaces. 2005 , 22, 1443	14
1476	Analytical demonstration of omnidirectional transmission enhancement in dispersive birefringent photonic-bandgap structures. 2005 , 22, 1785	8
1475	Surface plasmon polaritons at interfaces associated with artificial composite materials. 2005 , 22, 2686	24
1474	Backpropagating modes of surface polaritons on a cross-negative interface. 2005 , 13, 417-27	6
1473	Excitation of guided waves in layered structures with negative refraction. 2005 , 13, 481-92	63
1472	Negative refraction in Photonic Crystals: thickness dependence and Pendellung phenomenon. 2005 , 13, 1361-7	21
1471	Probing the negative permittivity perfect lens at optical frequencies using near-field optics and single molecule detection. 2005 , 13, 1604-14	17
1470	Experimental demonstration of negative refraction imaging in both amplitude and phase. 2005 , 13, 2007-12	17
1469	Super-resolution imaging through a planar silver layer. 2005 , 13, 2127-34	384
1468	Analysis of wave focusing inside a negative-index photonic-crystal slab. 2005 , 13, 2858-68	17
1467	Analysis of wave propagation in a two-dimensional photonic crystal with negative index of refraction: plane wave decomposition of the Bloch modes. 2005 , 13, 4160-74	14
1466	Design and measurement of a four-port device using metamaterials. 2005 , 13, 4737-44	11
1465	Three-dimensional photonic crystal flat lens by full 3D negative refraction. 2005 , 13, 5592-9	15

1464	Waveguiding, collimation and subwavelength concentration in photonic crystals. 2005 , 13, 7997-8007	16
1463	Refraction and rightness in photonic crystals. 2005 , 13, 8596-605	48
1462	Absolute left-handed behaviors in a triangular elliptical-rod photonic crystal. 2005 , 13, 9796-803	18
1461	Applied physics. How to build a superlens. <i>Science</i> , 2005 , 308, 502-3	33-3 52
1460	Left-handed multilayer super compact bandpass filter.	1
1459	Microwave devices based on composite right/left-handed (CRLH) transmission line metamaterials.	1
1458	Near-sighted superlens. 2005 , 30, 75-7	213
1457	Properties of photon tunneling through single-negative materials. 2005 , 30, 430-2	11
1456	Opposite Goos-Hänchen shifts for transverse-electric and transverse-magnetic beams at the interface associated with single-negative materials. 2005 , 30, 899-901	44
1455	Left-handed media and homogenization of photonic crystals. 2005 , 30, 1189-91	30
1454	Structure for localizing electromagnetic waves with a left-handed-medium slab and a conducting plane. 2005 , 30, 1216-8	8
1453	Planar heterogeneous structures for coherent emission of radiation. 2005 , 30, 1873-5	33
1452	Dispersion-free pulse propagation in a negative-index material. 2005 , 30, 1998-2000	22
1451	Resolving the wave vector in negative refractive index media. 2005 , 30, 2626-8	31
1450	Cut-wire pairs and plate pairs as magnetic atoms for optical metamaterials. 2005 , 30, 3198-200	407
1449	Negative index of refraction in optical metamaterials. 2005 , 30, 3356-8	1273
1448	A compact and low-profile metamaterial ring antenna with vertical polarization. 2005 , 4, 333-336	142
1447	. 2005 , 53, 1443-1450	53

1446	Miniaturization of a patch antenna with dispersive double negative medium substrates.	1
1445	Characterization of a volumetric metamaterial realization of an artificial magnetic conductor for antenna applications. 2005 , 53, 160-172	153
1444	Negative Refraction in Perspective. 2005 , 25, 365-389	68
1443	A broadband series power divider using zero-degree metamaterial phase-shifting lines. 2005 , 15, 808-810	121
1442	Negative refraction and focusing of circularly polarized waves in optically active media. 2005 , 95, 123904	129
1441	Nonlinear propagation of electromagnetic waves in negative-refraction-index composite materials. 2005 , 72, 016626	84
1440	Physics of negative refractive index materials. 2005 , 68, 449-521	684
1439	Negative refractive index metamaterials from inherently non-magnetic materials for deep infrared to terahertz frequency ranges. 2005 , 17, 3717-34	154
1438	Planar metamaterials and applications in directive antennas.	
1437	Guided-wave characteristics of waveguide based periodic structures loaded with various FSS strip layers. 2005 , 53, 120-124	20
1436	Second-harmonic generation from a positive-negative index material heterostructure. 2005 , 72, 066612	29
1435	Achieving transparency with plasmonic and metamaterial coatings. 2005 , 72, 016623	1063
1434	Coupled nonlinear Schrodinger field equations for electromagnetic wave propagation in nonlinear left-handed materials. 2005 , 71, 036614	147
1433	Spatial solitons in nonlinear left-handed metamaterials. 2005 , 7, S68-S72	42
1432	A brief intro to metamaterials. 2005 , 23, 44-46	96
1431	Fundamental modal properties of surface waves on metamaterial grounded slabs. 2005 , 53, 1431-1442	52
1430	Guided modes in a planar anisotropic biaxial slab with partially negative permittivity and permeability. 2005 , 87, 174102	13
1429	Metals and Metallic Alloys, Optical Properties of. 2005 , 392-403	

1428	Uniplanar left-handed artificial metamaterials. 2005 , 7, S44-S50	12
1427	Left-handed metamaterials: detailed numerical studies of the transmission properties. 2005 , 7, S12-S22	92
1426	A broadband Wilkinson balun using microstrip metamaterial lines. 2005 , 4, 209-212	120
1425	Modeling of patch antennas partially loaded with dispersive backward-wave materials. 2005 , 4, 266-269	15
1424	Polarization-dependent waveguide coupling utilizing single-negative materials. 2005 , 17, 369-371	14
1423	Characterization of infinite- and finite-extent coplanar waveguide metamaterials with varied left- and right-handed passbands. 2005 , 15, 805-807	21
1422	Simulation and testing of a graded negative index of refraction lens. 2005 , 87, 091114	88
1421	Negative-Refractive-Index Transmission-Line Metamaterials. 2005 , 1-52	7
1420	Microwave Devices and Antennas Using Negative-Refractive-Index Transmission-Line Metamaterials. 2005 , 53-91	4
1419	Super-Resolving Negative-Refractive-Index Transmission-Line Lenses. 2005 , 93-169	2
1418	Gaussian Beam Interactions with Double-Negative (DNG) Metamaterials. 2005 , 171-211	2
1417	Refractive index enhancement in a far-off resonant atomic system. 2005 , 95, 223601	53
1416	Modeling the effects of an individual SRR by equivalent circuit method.	0
1415	Characterization of meta-materials using computational electromagnetic methods.	
1414	On subwavelength and open resonators involving metamaterials of negative refraction index. 2005 , 7, 210-210	37
1413	Energy Transmission by Photon Tunneling in Multilayer Structures Including Negative Index Materials. 2005 , 127, 1046-1052	16
1412	A theory of metamaterials based on periodically loaded transmission lines: Interaction between magnetoinductive and electromagnetic waves. 2005 , 97, 064909	87
1411	Wave propagation in nonlinear left-handed transmission line media. 2005 , 87, 121109	53

1410	Midinfrared resonant magnetic nanostructures exhibiting a negative permeability. 2005 , 94, 037402	219
1409	Evanescent rectangular waveguide with corrugated walls: a composite right/left-handed metaguide. 2005 ,	10
1408	Per-unit-length parameters of 1-D CPW metamaterials with simultaneously series-C and shunt-L loading.	1
1407	Guided-wave characteristics of CPW transmission line metamaterials: effective per-unit-length parameters.	1
1406	A directive patch antenna with a metamaterial cover.	1
1405	Saturation of the magnetic response of split-ring resonators at optical frequencies. 2005 , 95, 223902	467
1404	Nonlinear surface waves at the interfaces of left-handed electromagnetic media. 2005 , 72, 036615	30
1403	Homogenization of 3-D-connected and nonconnected wire metamaterials. 2005 , 53, 1418-1430	98
1402	Diffraction by a grating made of a uniaxial dielectricmagnetic medium exhibiting negative refraction. 2005 , 7, 158-158	15
1401	Focusing by planoconcave lens using negative refraction. 2005 , 86, 201108	58
1400	Guided modes in negative-refractive-index fibres. 2005 , 7, S51-S56	27
1399	Cherenkov radiation by an electron bunch that moves in a vacuum above a left-handed material. 2005 , 72,	38
1398	Gradient index metamaterials. 2005 , 71, 036609	225
1397	Homogenization of electromagnetic crystals formed by uniaxial resonant scatterers. 2005 , 72, 026615	118
1396	Plasmon tunability in metallodielectric metamaterials. 2005 , 71,	41
1395	Generalized nonlinear Schrödinger equation for dispersive susceptibility and permeability: application to negative index materials. 2005 , 95, 013902	160
1394	Compact size highly directive antennas based on the SRR metamaterial medium. 2005 , 7, 223-223	50
1393	Active Left-Handed Transmission Line Media. 2006 ,	1

1392	The Design of High Gain Omni Directional Monopole Based on Conformal Metamaterial Cover. 2006 ,	1
1391	Three-dimensional isotropic perfect lens based on LC-loaded transmission lines. 2006 , 99, 064912	48
1390	Parametric amplification in left-handed transmission line media. 2006 , 88, 264101	44
1389	Dyadic Green's Function for a Right/Left-Handed Rectangular Waveguide. 2006 ,	2
1388	Diamagnetic response of metallic photonic crystals at infrared and visible frequencies. 2006 , 96, 223901	56
1387	All-angle broadband negative refraction of metal waveguide arrays in the visible range: theoretical analysis and numerical demonstration. 2006 , 97, 073901	121
1386	Novel architecture for waveguide based metamaterials. 2006 ,	0
1385	Dynamical Metamaterials at Terahertz Frequencies. 2006 ,	1
1384	Characterization and modeling of left-handed microstrip lines with application to loop antennas. 2006 , 54, 1084-1091	11
1383	Negative refraction and focusing analysis in a left-handed material slab and realization with a 3D photonic crystal structure. 2006 , 8, 199-204	2
1382	Discrete breathers in nonlinear magnetic metamaterials. 2006 , 97, 157406	84
1381	All-angle left-handed negative refraction in Kagomé and honeycomb lattice photonic crystals. 2006 , 73,	51
1380	Optical response of layers of embedded semiconductor quantum dots. 2006 , 74,	14
1379	Microwave devices based on left-handed transmission lines. 2006 ,	0
1378	Second-harmonic generation from magnetic metamaterials. <i>Science</i> , 2006 , 313, 502-4	33-3 547
1377	Negative group velocity of surface plasmons on thin metallic films. 2006 , 6323, 224	5
1376	Effect of microscopic disorder on magnetic properties of metamaterials. 2006 , 73, 056605	62
1375	Introduction, History, and Selected Topics in Fundamental Theories of Metamaterials. 1-41	10

1374	Printed high-directivity metamaterial MS/NRI coupled-line coupler for signal monitoring applications. 2006 , 16, 164-166	28
1373	Realization of Left-Handed Transmission Structures Using the Substrate Integrated Waveguide Technology. 2006 ,	5
1372	New differential phase shifters using novel right-handed metamaterial structures. 2006 ,	
1371	Design and experimental verification of backward-wave propagation in periodic waveguide structures. 2006 , 54, 1527-1533	29
1370	Metamaterial with randomized patterns for negative refraction of electromagnetic waves. 2006 , 88, 031908	24
1369	Electromagnetic waves and the realization of negative refraction in gyrotropic chiral medium.	
1368	Engineering the imaging properties of a metallic photonic-crystal slab lens. 2006 , 88, 031104	14
1367	Cavity resonance suppression in power delivery systems using electromagnetic band gap structures. 2006 , 29, 21-30	15
1366	Aperture Coupling and Dipole Excitation in Planar Waveguide Partially Filled With Left-Handed Material. 2006 , 54, 2605-2614	0
1365	Transmission Property of the Nonmagnetic Media with a Hyperbolic Dispersion Relation. 2006 ,	
1364	Experimental demonstration of negative index of refraction. 2006 , 88, 221103	132
1363	A Left-Handed Dipole Concept.	8
1362	Leaky Characteristics of the First Higher Order Mode in Microstrip Line with DNG/DPS Substrates. 2006 ,	
1361	Emulation of Propagation in Layered Anisotropic Media With Equivalent Coupled Microstrip Lines. 2006 , 16, 642-644	32
1360	Isotropic and gyrotropic chiral composite materials: dispersion and negative refractive index. 2006 ,	
1359	Negative dispersion cylindrical surface plasmon-polaritons in spatially inhomogeneous dielectric permittivity media. 2006 ,	
1358	Conjugate Left- and Right-handed Material Bilayered Substrates Qualify the Subwavelength Cavity Resonator Microstrip Antennas as Sensors. 2006 , 20, 2113-2122	8
1357	Experimental analysis of waveguide based metamaterial structures.	1

1356	. 2006 , 48, 38-54	13
1355	Electromagnetically induced left handedness in optically excited four-level atomic media. 2006 , 96, 053601	106
1354	Uniaxial metallo-dielectric metamaterials with scalar positive permeability. 2006 , 74, 046618	80
1353	Miniature Antennas and Arrays Embedded Within Magnetic Photonic Crystals. 2006 , 5, 168-171	28
1352	. 2006 ,	1
1351	Broadband composite right/left-handed coplanar waveguide power splitters with arbitrary phase responses and balun and antenna applications. 2006 , 54, 243-250	32
1350	The Study of Composite Right/Left Handed Structure in Substrate Integrated Waveguide. 2006 ,	6
1349	Modeling of isotropic backward-wave materials composed of resonant spheres. 2006 , 99, 043102	120
1348	Electrically small antenna elements using negative permittivity resonators. 2006 , 54, 1644-1653	88
1347	Observation of the Parametric Amplification in Nonlinear Left-Handed Transmission Line Metamaterials. 2006 ,	
1346	Ultrashort solitons and kinetic effects in nonlinear metamaterials. 2006 , 73, 037601	53
1345	On extending the concept of double negativity to acoustic waves. 2006 , 7, 24-28	36
1344	Negative-Index Metamaterials: Going Optical. 2006 , 12, 1106-1115	97
1343	Dual Composite Right/Left-Handed (D-CRLH) Transmission Line Metamaterial. 2006 , 16, 585-587	120
1342	Dynamical electric and magnetic metamaterial response at terahertz frequencies. 2006 ,	2
1341	Subwavelength imaging at optical frequencies using a transmission device formed by a periodic layered metal-dielectric structure operating in the canalization regime. 2006 , 73,	242
1340	Excitations of space and surface waves by patch and slot antennas on metamaterial grounded slab. 2006 ,	1
1339	Electrodynamics of moving media inducing positive and negative refraction. 2006 , 74,	22

1338	Effective medium theory for magnetodielectric composites: Beyond the long-wavelength limit. 2006 , 74,	158
1337	Additional boundary condition for the wire medium. 2006 , 54, 1766-1780	101
1336	Design and fabrication of planar multilayer structures with coherent thermal emission characteristics. 2006 , 100, 063529	90
1335	Electric-field-coupled resonators for negative permittivity metamaterials. 2006 , 88, 041109	528
1334	Lead Invited Talk: Antenna Applications of Negative-Refractive-Index Transmission-Line Metamaterials.	
1333	Review of Electromagnetic Theory in Left-handed Materials. 2006 , 20, 2137-2151	70
1332	. 2006 , 16, 1893-1897	18
1331	Photonic Metamaterials: Magnetism at Optical Frequencies. 2006 , 12, 1097-1105	140
1330	Finite-difference time-domain analysis of the tunneling and growing exponential in a pair of epsilon-negative and mu-negative slabs. 2006 , 74, 016604	14
1329	Accurate circuit analysis of resonant-type left handed transmission lines with inter-resonator coupling. 2006 , 100, 074908	19
1328	Negative index of refraction in artificial chiral materials. 2006 , 18, 6883-6890	51
1327	Electromagnetic energy in a dispersive metamaterial. 2006 , 73,	51
1326	Design for electromagnetic wave transparency with metamaterials. 2006 , 74, 026607	44
1325	Microstrip Antennas with Left-Handed Materials Substrates. 2006 , 20, 1221-1233	28
1324	Modulation instability in nonlinear negative-index material. 2006 , 73, 036617	127
1323	Acoustic backward-wave negative refractions in the second band of a sonic crystal. 2006 , 96, 014301	107
1322	Refraction control of acoustic waves in a square-rod-constructed tunable sonic crystal. 2006 , 73,	33
1321	Selected Antenna Applications of Negative-Refractive-Index Transmission-Line (NRI-TL) Metamaterials.	

1320	Negative index materials using simple short wire pairs. 2006 , 73,	303
1319	Tunneling modes of photonic heterostructures consisting of single-negative materials. 2006 , 88, 211112	65
1318	Negative permeability spectra in Permalloy granular composite materials. 2006 , 88, 172502	88
1317	Negative refraction in two-dimensional photonic crystals. 2006 , 53, 1531-1539	1
1316	Numerical simulation of a new kind of metamaterial with negative refraction property. 2006 ,	
1315	Free-space microwave focusing by a negative-index gradient lens. 2006 , 88, 081101	97
1314	Magnetic plasmon propagation along a chain of connected subwavelength resonators at infrared frequencies. 2006 , 97, 243902	136
1313	Doppler radiation emitted by an oscillating dipole moving inside a photonic band-gap crystal. 2006 , 96, 043903	20
1312	Bloch vector dependence of the plasma frequency in metallic photonic crystals. 2006 , 74, 056612	11
1311	Locally resonant cavity cell model for electromagnetic band gap structures. 2006 , 54, 90-100	49
1310	Near-field enhancement and subwavelength imaging in the optical region using a pair of two-dimensional arrays of metal nanospheres. 2006 , 74,	35
1309	Reflection and transmission of Gaussian beam from a uniaxial crystal slab. 2006 , 75, 569-575	5
1308	Self-Organized, Rodlike, Micrometer-Scale Microstructure of Tb ₃ Sc ₂ Al ₃ O ₁₂ /bScO ₃ :Pr Eutectic. 2006 , 18, 2450-2457	69
1307	Negative Index of Refraction in Anisotropic Nonmagnetic Materials. 2006 , 338, 195-203	6
1306	Experimental demonstration of subwavelength focusing of electromagnetic waves by labyrinth-based two-dimensional metamaterials. 2006 , 31, 814-6	19
1305	Single-slit split-ring resonators at optical frequencies: limits of size scaling. 2006 , 31, 1259-61	179
1304	Nanoscale metal waveguide arrays as plasmon lenses. 2006 , 31, 1322-4	45
1303	Left-handed properties of erbium-doped crystals. 2006 , 31, 1803-5	51

1302	Subwavelength imaging with a multilayer silver film structure. 2006 , 31, 2130-2	52
1301	Conservation of electromagnetic momentum and radiation forces exerted on left-handed material interfaces. 2006 , 31, 2480-2	4
1300	Fitting-based determination of an effective medium of a metallic periodic structure and application to photonic crystals. 2006 , 23, 199-207	20
1299	Exact solution to plane-wave scattering by an ideal "left-handed" wedge. 2006 , 23, 339-48	2
1298	Complex source description of focal regions. 2006 , 23, 788-99	
1297	Classification of dispersion equations for homogeneous, dielectric-magnetic, uniaxial materials. 2006 , 23, 949-55	23
1296	Resolution of negative-index slabs. 2006 , 23, 1768-78	
1295	Brewster angle and optical tunneling in one-dimensional photonic crystals composed of left- and right-handed materials. 2006 , 23, 375	5
1294	Spectroscopy of metamaterials from infrared to optical frequencies. 2006 , 23, 404	48
1293	Negative refraction through an impedance-matched left-handed metamaterial slab. 2006 , 23, 415	23
1292	Demonstration of metal-dielectric negative-index metamaterials with improved performance at optical frequencies. 2006 , 23, 434	176
1291	Eikonal equation for a general anisotropic or chiral medium: application to a negative-graded index-of-refraction lens with an anisotropic material. 2006 , 23, 439	16
1290	Enhanced near-field resolution in midinfrared using metamaterials. 2006 , 23, 468	45
1289	Tunable superlensing by a mechanically controlled photonic crystal. 2006 , 23, 479	12
1288	Zero- n bandgap in photonic crystal superlattices. 2006 , 23, 506	47
1287	Second-harmonic generation in nonlinear left-handed metamaterials. 2006 , 23, 529	152
1286	Double-resonant optical materials with embedded metal nanostructures. 2006 , 23, 535	31
1285	Volumetric layered transmission-line metamaterial exhibiting a negative refractive index. 2006 , 23, 553	25

1284	Optical nanotransmission lines: synthesis of planar left-handed metamaterials in the infrared and visible regimes. 2006 , 23, 571	159
1283	Conditions of near-zero dispersion of defect modes in one-dimensional photonic crystals containing negative-index materials. 2006 , 23, 776	23
1282	Total transmission of electromagnetic waves at interfaces associated with an indefinite medium. 2006 , 23, 904	16
1281	Bianisotropic response of microfabricated metamaterials in the terahertz region. 2006 , 23, 1174	32
1280	Dispersion characteristics of asymmetric double-negative material slab waveguides. 2006 , 23, 1757	22
1279	Omnidirectional resonance modes in photonic crystal heterostructures containing single-negative materials. 2006 , 23, 2237	26
1278	Theory of the transmission properties of an optical far-field superlens for imaging beyond the diffraction limit. 2006 , 23, 2383	106
1277	Lateral displacement of a Gaussian beam transmitted through a one-dimensional left-handed meta-material slab. 2006 , 14, 1161-6	6
1276	Negative effective permeability and left-handed materials at optical frequencies. 2006 , 14, 1557-67	236
1275	Photorealistic images of objects in effective negative-index materials. 2006 , 14, 1842-9	26
1274	Perfect lens makes a perfect trap. 2006 , 14, 2228-35	9
1273	Left-handed extraordinary optical transmission through a photonic crystal of subwavelength hole arrays. 2006 , 14, 5445-55	99
1272	Negative index metamaterial combining magnetic resonators with metal films. 2006 , 14, 7872-7	85
1271	Group front evolution of Gaussian beam refracted from a right- to left-handed medium. 2006 , 14, 8232-9	1
1270	Spatial mapping of the internal and external electromagnetic fields of negative index metamaterials. 2006 , 14, 8694-705	88
1269	Three-dimensional structures in nonlinear cavities containing left-handed materials. 2006 , 14, 9338-43	35
1268	Positive phase evolution of waves propagating along a photonic crystal with negative index of refraction. 2006 , 14, 9805-14	5
1267	Tunable negative refraction photonic crystals achieved by liquid crystals. 2006 , 14, 10580-7	25

1266	Coupling effect of magnetic polariton in perforated metal/dielectric layered metamaterials and its influence on negative refraction transmission. 2006 , 14, 11155-63	77
1265	Doubly negative metamaterials in the near infrared and visible regimes based on thin film nanocomposites. 2006 , 14, 11164-77	31
1264	Subdiffraction focusing of scanning beams by a negative-refraction layer combined with a nonlinear layer. 2006 , 14, 11194-203	4
1263	Multi-frequency resonator based on dual-band S-shaped left-handed material. 2006 , 14, 12288-94	8
1262	Low-order aberration corrections of multilayer flat lenses using negative-index materials. 2006 , 45, 6925-31	3
1261	Leaky-Wave Steering in a Two-Dimensional Metamaterial Structure Using Wave Interaction Excitation. 2006 ,	7
1260	Experimental verification of the key properties of a three-dimensional isotropic transmission-line superlens. 2006 , 99, 124910	43
1259	CRANKLED S-RING RESONATOR WITH SMALL ELECTRICAL SIZE. 2006 , 66, 179-190	18
1258	NOVEL BROADBAND TERAHERTZ NEGATIVE REFRACTIVE INDEX METAMATERIALS: ANALYSIS AND EXPERIMENT. 2006 , 64, 205-218	33
1257	GROUP THEORY BASED DESIGN OF ISOTROPIC NEGATIVE REFRACTIVE INDEX METAMATERIALS. 2006 , 63, 295-310	25
1256	ABSORBING PROPERTIES OF A NEGATIVE PERMITTIVITY LAYER PLACED ON A REFLECTING GRATING. 2006 , 64, 135-148	10
1255	ELECTROMAGNETIC SCATTERING BY PARALLEL METAMATERIAL CYLINDERS. 2006 , 57, 165-177	23
1254	Subwavelength Imaging by Full 3D Negative Refraction Using a 3D Photonic Crystal. 2006 , ThA2	
1253	. 2006 ,	897
1252	ANALYSIS OF GUIDED MODES IN ASYMMETRIC LEFT-HANDED SLAB WAVEGUIDES. 2006 , 62, 203-215	27
1251	COMPLETE MODE SPECTRUM OF A GROUNDED DIELECTRIC SLAB WITH DOUBLE NEGATIVE METAMATERIALS. 2006 , 65, 103-123	20
1250	ELECTROMAGNETIC SCATTERING BY A SET OF OBJECTS: AN INTEGRAL METHOD BASED ON SCATTERING OPERATOR. 2006 , 57, 55-84	11
1249	Negative refractive optics. 2006 ,	

1248	Space-Filling Curve High-Impedance Ground Planes. 377-402	0
1247	Refraction Experiments in Waveguide Environments. 113-140	2
1246	Antenna Applications and Subwavelength Focusing Using Negative-Refractive-Index Transmission Line Structures. 141-169	
1245	Historical Perspective and Review of Fundamental Principles in Modeling Three-Dimensional Periodic Structures with Emphasis on Volumetric EBGs. 211-238	
1244	Large Goos-Hänchen shifts from an asymmetric configuration with single-negative materials due to surface polariton resonance. 2006 ,	
1243	Frequency dependence of the magnetic response of split-ring resonators. 2006 ,	
1242	Applications of hardware-based simulation platforms to negative-index material analysis. 2006 ,	
1241	Two-dimensional Left-handed Metamaterial with a Negative Refractive Index. 2006 , 36, 6-11	6
1240	Investigation of an effective medium theory for metallic periodic structures: a fitting-based approach. 2006 , 6128, 372	2
1239	Sub-wavelength imaging at radio frequency. 2006 , 18, L315-L321	40
1238	Negative refractive index metamaterials. 2006 , 9, 28-35	239
1237	Device physics: a terahertz modulator. 2006 , 444, 560-1	14
1236	The left hand of brightness: past, present and future of negative index materials. 2006 , 5, 759-62	151
1235	Not just a light story. 2006 , 5, 755	3
1234	Active terahertz metamaterial devices. 2006 , 444, 597-600	1584
1233	Systems biology: many things from one. 2006 , 444, 561-2	11
1232	Omni-reflectance and enhanced resonant tunneling from multilayers containing left-handed materials. 2006 , 4, 123-131	51
1231	Negative magnetic permeability of split ring resonators in the visible light region. 2006 , 258, 300-305	27

1230	Experimental observation of negative lateral displacements of microwave beams transmitting through dielectric slabs. 2006 , 259, 470-473	5
1229	Independent determination of the complex refractive index and wave impedance by time-domain terahertz spectroscopy. 2006 , 260, 175-183	20
1228	Veselago's lens consisting of left-handed materials with arbitrary index of refraction. 2006 , 264, 130-134	19
1227	Focusing and phase compensation of paraxial beams by a left-handed material slab. 2006 , 266, 327-331	15
1226	Imaging properties of triangular lattice photonic crystal at the lowest band. 2006 , 348, 405-409	4
1225	Perfect antireflection via negative refraction. 2006 , 349, 281-284	3
1224	Derivation and characterization of dispersion of defect modes in photonic band gap from stacks of positive and negative index materials. 2006 , 351, 446-451	12
1223	Wave propagation inside one-dimensional photonic crystals with single-negative materials. 2006 , 350, 410-415	20
1222	Investigation of nonlinear wave propagation in multilayered structures containing left-handed layers—delta-function approach. 2006 , 351, 184-191	3
1221	Effectively negatively refractive material made of negative-permittivity and negative-permeability bilayer. 2006 , 351, 391-397	8
1220	Field propagation of a metallic grid slab that acts as a metamaterial. 2006 , 353, 171-178	2
1219	Photonic-resonant left-handed medium. 2006 , 357, 54-60	23
1218	Near-field enhancement and imaging in double cylindrical polariton-resonant structures: Enlarging superlens. 2006 , 357, 397-400	21
1217	Lateral shift of acoustic wave at interface between double-positive and double-negative media. 2006 , 358, 484-486	5
1216	Unusual transmission properties of wave in one-dimensional random system containing left-handed-material. 2006 , 359, 542-546	28
1215	Refraction in the fixed direction at the surface of dielectric/silver superlattice. 2006 , 359, 547-549	3
1214	Locally resonant gaps of photonic crystals constituted by metamaterials. 2006 , 292, 345-346	
1213	Nanofabrication of negative refractive index metasurfaces. 2006 , 83, 1786-1791	4

1212	Basic materials research programs at the U.S. Air Force Office of Scientific Research. 2006 , 132, 2-7	13
1211	Application of the differential method to uniaxial gratings with an infinite number of refraction channels: Scalar case. 2006 , 258, 90-96	5
1210	Investigation of one-dimensional photonic crystals composed of dispersive materials. 2006 , 265, 542-550	5
1209	Anomalous wave propagation in quasiisotropic media. 2006 , 267, 271-277	5
1208	Effective dielectric constant of two-dimensional photonic crystals in optical bands. 2006 , 138, 205-210	3
1207	Negative refractive behavior of a two-dimensional negative-index photonic crystals using a wave vector diagram method. 2006 , 139, 345-350	6
1206	Magnetic response of dendritic structures at infrared frequencies. 2006 , 140, 9-13	14
1205	Negative diffraction pattern dynamics in nonlinear cavities with left-handed materials. 2006 , 74,	64
1204	Simultaneous negative phase and group velocity of light in a metamaterial. <i>Science</i> , 2006 , 312, 892-4	33.3 608
1203	A power divider based on a new kind of composite right/left-handed transmission line (CRLH TL) unit. 2006 , 7, 1-4	6
1202	Left-handed materials in magnetized metallic magnetic thin films. 2006 , 7, 71-75	4
1201	Bragg reflectors based on alternate RHTL-LHTL structures. 2006 , 7, 81-84	
1200	Discussion on coupling mechanism of asymmetric CRLH/RH TL coupler. 2006 , 7, 95-98	2
1199	Analytical solution for electromagnetic scattering from a sphere of uniaxial left-handed material. 2006 , 7, 99-104	9
1198	Dual structure of composite right/left-handed transmission line. 2006 , 7, 1777-1780	2
1197	Backward waves and negative refractive indices in gyrotropic chiral media. 2006 , 39, 457-466	17
1196	Identifying magnetic response of split-ring resonators at microwave frequencies. 2006 , 14,	23
1195	Tb3Sc2Al3O12-TbScO3 eutectic self-organized microstructure for metamaterials and photonic crystals application. 2006 , 14,	14

1194	Methods of crystal optics for studying electromagnetic phenomena in metamaterials: Review. 2006 , 51, 1048-1062	4
1193	Inverted (negative) refraction of an electromagnetic wave in an anisotropic medium. 2006 , 103, 354-359	4
1192	Omnidirectional zero- \bar{n} gap in symmetrical Fibonacci sequences composed of positive and negative refractive index materials. 2006 , 52, 37-40	5
1191	Anomalous lateral beam shift and total absorption due to excitation of surface waves in materials with negative refraction. 2006 , 39, 295-301	7
1190	Controlling electromagnetic fields. <i>Science</i> , 2006 , 312, 1780-2	33.3 5883
1189	Optical conformal mapping. <i>Science</i> , 2006 , 312, 1777-80	33.3 2991
1188	Dynamical electric and magnetic metamaterial response at terahertz frequencies. 2006 , 96, 107401	616
1187	Coated nonmagnetic spheres with a negative index of refraction at infrared frequencies. 2006 , 73,	144
1186	Numerical Study on Left-Handed Materials Made of Ferrite and Metallic Wires. 2006 , 23, 348-351	12
1185	Some antenna applications of negative-refractive-index transmission-line (NRI-TL) metamaterials. 2006 ,	0
1184	Review of Left-Handed Metamaterials: Evolution from Theoretical and Numerical Studies to Potential Applications. 2006 , 20, 2053-2064	60
1183	Singularity index of the electromagnetic field on the edge in the presence of the Veselago medium. 2006 , 49, 853-856	1
1182	Reflection of Surface Plasmon Polaritons by a Corner Reflector of Negative Index Materials. 2006 , 13, 213-214	
1181	The imaging properties of photonic crystal slabs with effective negative refraction indexes. 2006 , 83, 587-594	5
1180	Linear polarizer made of indefinite media. 2006 , 84, 261-264	5
1179	Using metamaterial yokes in NMR measurements. 2006 , 182, 200-7	11
1178	Negative refraction and focusing of electromagnetic wave through two-dimensional photonic crystals. 2006 , 1, 396-404	5
1177	Analysis of left-handed rectangular waveguides with dielectric-filled corrugations using the asymptotic corrugation boundary conditions. 2006 , 153, 221	11

1176	Role of Ferrites in Negative Index Metamaterials. 2006 , 42, 2852-2854	28
1175	Arbitrarily dual-band components using simplified structures of conventional CRLH TLs. 2006 , 54, 2902-2909	37
1174	Possible existence of a new type of left-handed materials in coupled ferromagnetic bilayer films. 2006 , 302, 368-374	11
1173	Properties of magnetically coupled metamaterial elements. 2006 , 300, 38-43	34
1172	Gyrotropic left-handed media: Energy flux and circular dichroism. 2006 , 300, e67-e69	7
1171	Focusing of waves at low microwave frequencies using metallic wire media. 2006 , 48, 133-138	0
1170	Comparing double-negative and double-positive covers around a radiating line current. 2006 , 48, 250-252	5
1169	Fresnel coefficients for a permittivity-permeability phase space encompassing vacuum, anti-vacuum, and nihility. 2006 , 48, 265-270	11
1168	Compact 2D Hilbert microstrip resonators. 2006 , 48, 270-273	11
1167	Uniaxial dielectric media with hyperbolic dispersion relations. 2006 , 48, 363-367	23
1166	Active integrated antenna using T-shaped microstrip-line-fed slot antenna. 2006 , 48, 367-370	2
1165	Calculation of the negative refractive index of a LHM slab by the free-space mapping of the laterally shifted refracted beam. 2006 , 48, 593-596	1
1164	Distributed amplifiers with composite left/right-handed transmission lines. 2006 , 48, 609-613	19
1163	Integrated antenna for multiband multi-national wireless combined with GSM1800/PCS1900/IMT2000 + extension. 2006 , 48, 613-615	14
1162	A novel notch filter utilizing a composite right/left-handed transmission line. 2006 , 48, 626-628	4
1161	Left-handed rectangular waveguide bandstop filters. 2006 , 48, 846-848	12
1160	A double-spiral resonator structure to realize left-handed material with lower resonant frequency. 2006 , 48, 923-926	6
1159	Effective complex permittivity and permeability of composite planar left-handed transmission-line metamaterials on CPW. 2006 , 48, 1050-1052	2

1158	Scattering and radiation characteristics of step discontinuity in a double-negative (DNG) slab waveguide operating in the evanescent surface mode. 2006 , 48, 1085-1088	1
1157	Use of extended ground plane to improve the performance of a slot-loop antenna with narrow outer conductor. 2006 , 48, 1088-1092	
1156	Spiral inductors fabricated on multi-layered Bragg reflector for Si-based RF IC applications. 2006 , 48, 1296-1298	
1155	Backward-wave directional coupler with complete coupling and broadband using conventional microstrip and 1D mushroom structure. 2006 , 48, 1293-1296	5
1154	Strong localization of EM waves using open cavities made of left-handed transmission-line media. 2006 , 48, 1662-1665	0
1153	Enhanced microstrip stopband filter using a metamaterial substrate. 2006 , 48, 1522-1525	7
1152	Comparison of measurement and simulation of both amplitude and phase of reflected and transmitted fields in resonant Omega media. 2006 , 48, 1549-1553	8
1151	Design and implementation of multilayer coupled-resonator bandpass filter with harmonics suppression. 2006 , 48, 1779-1781	
1150	A novel power divider utilizing composite right/left-handed transmission line. 2006 , 48, 1776-1779	3
1149	Novel filter using composite right/left-handed transmission line. 2006 , 48, 2013-2015	4
1148	A 3D hybrid implicit-explicit FDTD scheme with weakly conditional stability. 2006 , 48, 2291-2294	63
1147	Electromagnetic energy in absorptive and dispersive medium based on the assembly of atomic oscillators. 2006 , 48, 2288-2291	0
1146	High-power emission, narrow-beam scanning, and sub-wavelength imaging using conducting gratings and left-handed materials. 2006 , 48, 2359-2365	
1145	On the constitutive relations of G-chiral media and the possibility to realize negative-index media. 2006 , 48, 2534-2538	12
1144	Designing materials with desired electromagnetic properties. 2006 , 48, 2611-2615	6
1143	Verification of impedance matching at the surface of left-handed materials. 2006 , 48, 2548-2552	5
1142	Waves in 2D anisotropic L-C lattice metamaterials: Phenomenology and properties. 2006 , 48, 2538-2542	3
1141	Guest editorial for special issue on metamaterials and special materials for electromagnetic applications and telecommunications. 2006 , 48, 2481-2482	2

1140	Experimental verification of an optical negative-index material. 2006 , 3, 49-55	97
1139	Negative refraction makes photonic crystal as super-concave-mirror. 2006 , 3, 216-219	1
1138	On the transmission properties of left-handed microstrip lines implemented by complementary split rings resonators. 2006 , 19, 87-103	37
1137	Wave properties of computational TLM models of metamaterials with negative refractive index. 2006 , 19, 119-139	
1136	Microwave Studies of Photonic Crystals. 2006 , 8, 1156-1161	1
1135	Formation of Silver Nanoprisms with Surface Plasmons at Communication Wavelengths. 2006 , 16, 766-773	220
1134	Fabrication and Characterization of Three-Dimensional Silver-Coated Polymeric Microstructures. 2006 , 16, 1739-1744	66
1133	Negative-Index Materials: New Frontiers in Optics. 2006 , 18, 1941-1952	161
1132	Extension of the Method of Single Expression for Analysis of Materials with Complex Permittivity and Permeability. 2006 ,	2
1131	Stopband Phenomena in the Passband of Left-Handed Metamaterials. 2006 , 23, 99-102	9
1130	Evolution of polarization in an atomic vapour with negative refractive index. 2006 , 74, 271-278	1
1129	Electromagnetic energy in dispersive magnetodielectric linear media. 2006 , 39, 17-25	3
1128	Focusing Properties in Photonic Crystal Structure Formed by Air Holes in Dielectric Background with Concave Interface. 2006 , 23, 3359-3362	1
1127	Microscopic disorder in metamaterials. 2006 , WD2	
1126	A novel metamaterial structure with high dielectric resonators. 2006 , WD27	
1125	Broadband left-handed materials made of thin soft ferromagnetic films with in-plane uniaxial anisotropy. 2006 , 18, 6421-6428	6
1124	Transmission Loss due to Modes Conversion Caused by Random Surface Imperfections in Left-Handed-Material Slab Waveguides. 2006 , 23, 1826-1829	1
1123	Negative Refraction and Imaging in a Triangular-Lattice Metallic Photonic-Crystal Slab. 2006 , 23, 994-997	4

1122	Ultra-Compact, Subwavelength and Single-Mode Cavity Resonator. 2006 , 23, 1600-1602	3
1121	Negative refraction and partial focusing in an anisotropic metamaterial realized by a loaded transmission line network. 2006 , 39, 213-219	7
1120	Micro-mould method for self-assembling three-dimensional opal photonic crystals. 2006 , 39, 2100-2104	
1119	Anomalous Propagation of Electromagnetic Waves in Anisotropic Media with a Unique Dispersion Relation. 2006 , 23, 3084-3087	0
1118	Reflection and Refraction on the Boundary of a Left-Handed Material with a Hyperbolic Dispersion Relation. 2006 , 23, 1296-1298	1
1117	Optical transmission spectra in quasiperiodic multilayered photonic structure. 2006 , 18, 8737-8747	29
1116	Subwavelength imaging by a dielectric-tube photonic crystal. 2006 , 8, 831-834	2
1115	Anomalous reflection and refraction in anisotropic metamaterial realized by periodically loaded transmission line network. 2006 , 100, 114901	8
1114	A new kind of collimator made of photonic crystal with negative refraction. 2006 , 8, 114-117	1
1113	Dual-band sub-harmonic quadrature mixer using composite right/left-handed transmission lines. 2006 , 153, 365	21
1112	Ferromagnetic wire lattice with a tunable negative index of refraction for microwaves using an external magnetic field. 2006 , 75, 737-742	8
1111	Negative refraction device with electrically controllable permittivity and negative permeability. 2006 , 42, 223	2
1110	Experimental demonstration of negative refraction and subwavelength imaging by left-handed composite metamaterials. 2006 , 919, 6	
1109	Electromagnetic wave focusing from sources inside a two-dimensional left-handed material superlens. 2006 , 8, 221-221	13
1108	Photonic crystals. 2006 , 49, 177-313	9
1107	Realization of 3D Isotropic Negative Index Materials using Massively Parallel and Manufacturable Microfabrication and Micromachining Technology. 2006 , 919, 1	1
1106	Negative Index Metamaterials with Deeply Subwavelength Structural Dimensions from Near Infrared to Visible Based on Thin Films 2006 , 964, 1	
1105	A DoD Perspective on Left Handed Negative Index Materials and Potential Applications. 2006 , 919, 1	1

1104	RADIATION PRODUCED BY FAST PARTICLES IN LEFT-HANDED MATERIALS (LHM) AND PHOTONIC CRYSTALS (PHC). 2006 , 71-96	
1103	Numerical simulations of negative-index refraction in a lamellar composite with alternating single negative layers. 2006 , 15, 1772-1776	8
1102	A possible mechanism of current in medium under electromagnetic wave. 2006 , 15, 1752-1754	1
1101	Near-field imaging of a square-lattice metallic photonic-crystal slab at the second band. 2006 , 15, 552-555	4
1100	Subwavelength rectangular cavity partially filled with left-handed materials. 2006 , 15, 1154-1160	12
1099	Negative Permeability of Single-ring Split Ring Resonator in the Visible Light Frequency Region. 2006 , 919, 8	1
1098	Molecular Scale Imaging with a Multilayer Superlens. 2006 , 919, 7	4
1097	Multilayer structures as negative refractive and left-handed materials. 2006 , 18, L89-95	10
1096	FDTD Modeling of Double Negative Metamaterials Characterized by High-Order Frequency-Dispersive Constitutive Parameters. 2006 ,	4
1095	Miniature coplanar waveguide and microstrip stop-band filters using spiral resonators. 2006 ,	2
1094	Chemical Route Fabricated Magnetic Structure Exhibiting a Negative Permeability at Infrared Frequencies. 2006 , 919, 8	1
1093	Excitation of surface waves in a photonic crystal with negative refraction: The role of surface termination. 2006 , 74,	20
1092	Backward coupling waveguide coupler using left-handed material. 2006 , 88, 211903	18
1091	Generation and control of optical vortices using left-handed materials. 2006 , 74, 016601	12
1090	Experimental demonstration of artificial dielectrics with a high index of refraction. 2006 , 74,	31
1089	Optical properties of two-dimensional negative-phase-velocity-medium photonic crystals. 2006 , 73, 066625	4
1088	Focusing of scanning light beams below the diffraction limit without near-field spatial control using a saturable absorber and a negative-refraction material. 2006 , 96, 013902	6
1087	Tunable negative refraction in nematic liquid crystals. 2006 , 89, 221918	26

1086	Optical magnetic response from parallel plate metamaterials. 2006 , 74,	23
1085	Photon Tunnelling Effect in One Dimensional Photonic Crystal Containing Partially Negative Permittivity Uniaxial Materials. 2006 ,	
1084	Strong optical activity in chiral metamaterials of metal screw hole arrays. 2006 , 89, 211105	30
1083	Characterization of a Volumetric Negative-Refractive-Index Transmission-Line (NRI-TL) Metamaterial for Incident Waves from Free-Space. 2006 ,	1
1082	Uniaxial crystal slabs as amphoteric-reflecting media. 2006 , 73,	6
1081	Negatively refracting atomic vapour. 2006 , 53, 2195-2205	20
1080	On the Use of LHM Lens for Near-Field Target Detection and Imaging. 2006 ,	1
1079	On Burnett coefficients in periodic media. 2006 , 47, 032902	21
1078	Experiments on evanescent-wave amplification and transmission using metamaterial structures. 2006 , 73,	27
1077	Enhanced parametric processes in binary metamaterials. 2006 , 88, 071912	37
1076	Experimental demonstration of non-near-field image formed by negative refraction. 2006 , 73,	21
1075	Localized gap-edge fields of one-dimensional photonic crystals with an epsilon-negative and a mu-negative defect. 2006 , 73, 046601	22
1074	Direct measurement of evanescent wave enhancement inside passive metamaterials. 2006 , 73, 016617	34
1073	Negative index of refraction: A subclass of electromagnetically metamorphic materials. 2006 , 89, 144109	4
1072	Getting effective permittivity and permeability equal to 1 in 1D dielectric photonic crystals. 2006 , 53, 1901-1917	2
1071	Negative refraction of spintronics and spin beam splitter. 2006 , 88, 052114	30
1070	Tailoring the near-field guiding properties of magnetic metamaterials with two resonant elements per unit cell. 2006 , 73,	51
1069	Unattenuated light transmission through the interface between two materials with different indices of refraction using magnetic metamaterials. 2006 , 73,	48

1068 Three-dimensional Hilbert space-filling-curve plasmonics. **2006,**

1067 Tunable negative refraction and subwavelength imaging in the metal-dielectric composites of nonspherical particles. **2006,**

1

1066 A perfect lens makes a perfect trap. **2006,**

1065 Negative refraction and plano-concave lens focusing in one-dimensional photonic crystals. **2006,** 89, 084104

19

1064 Lateral shifts of optical beams on the interface of anisotropic metamaterial. **2006,** 99, 066114

13

1063 Optical negative index metamaterials with improved performance. **2006,**

1062 Polarization beam splitter based on a two-dimensional photonic crystal of pillar type. **2006,** 89, 171115

95

1061 Metamaterials in the far infrared: ideas for left-handed metamaterials and micro- and nanocircuit elements in the terahertz regime. **2006,**

1

1060 Scattering and absorption of electromagnetic waves in inhomogeneous bodies. **2006,**

1

1059 Effect of electromagnetic environment on the dielectric resonance in the ferroelectric-ferromagnetic composite. **2006,** 89, 112907

15

1058 Non-effective medium composite right/left handed transmission lines-design and applications. **2006,**

1057 Rotational resonance of magnetoinductive waves: Basic concept and application to nuclear magnetic resonance. **2006,** 99, 123908

24

1056 Determination of the effective parameters of a metamaterial by field summation method. **2006,** 100, 084908

36

1055 Eigenmodes of metallic ring systems: A rigorous approach. **2006,** 74,

36

1054 Light scattering by a thin wire with a surface-plasmon resonance: Bifurcations of the Poynting vector field. **2006,** 73,

74

1053 Optical Negative-Index Metamaterials: from low to no-loss and from linear to nonlinear optics. **2006,**

1052 Properties of Faraday chiral media: Green dyadics and negative refraction. **2006,** 74,

14

1051 From low-loss to lossless optical negative-index materials. **2006,**

1

1050	Subwavelength imaging: Resolution enhancement using metal wire gratings. 2006 , 73,	24
1049	Negative Refractive Index in a Four-Level Atomic System. 2006 , 23, 1769-1772	11
1048	Temporal-coherence gain of superlens image with quasimonochromatic source. 2006 , 89, 221102	5
1047	Low-pass Spatial Filtering Using Optically Thinner Left-handed Photonic Crystals. 2006 ,	1
1046	Negative Permeability in Atomic and Molecular Systems at Microwave Frequency. 2006 ,	
1045	Super-resolution imaging of dielectric objects using a slab of left-handed material. 2006 , 89, 141904	11
1044	Isotropic left handed material at optical frequency with dielectric spheres embedded in negative permittivity medium. 2006 , 88, 161122	30
1043	Negative refractive index in gyrotropically magnetoelectric media. 2006 , 73,	24
1042	Observation of an inverse Doppler shift from left-handed dipolar spin waves. 2006 , 74,	25
1041	Experimental observation of evanescent-wave amplification and propagation in microwave regime. 2006 , 89, 221919	8
1040	Negative refraction imaging of acoustic waves by a two-dimensional three-component phononic crystal. 2006 , 73,	57
1039	Enhancement of Backscattered Microwave by using a Flat LHM Lens. 2006 ,	1
1038	Metamaterials Realized by Novel Compact Structures. 2006 ,	
1037	Focussing by Negative-Index Effect in Two-Dimensional Photonic Crystals in a High-Index-Contrast Material System. 2006 ,	
1036	Numerical Analysis of CRLH Transmission Line using Lumped Element FDTD Method. 2006 ,	
1035	The properties of photon tunneling through the asymmetry structure with left-handed materials. 2006 ,	
1034	A novel dual-band balun based on the dual structure of composite right/left handed transmission line. 2006 ,	1
1033	An Innovative Unit Cell Guide to Multimodal Frequency-Selective Surfaces. 2006 ,	2

1032	Compact and Broadband Coplanar Waveguide Left-Handed Metamaterial Transmission Line for RF/MICC Application. 2006,	
1031	Coaxial Probe Excitation of Evanescent Waveguides Loaded with Split Ring Resonators. 2006,	3
1030	Effective index of refraction in guide wave mode for ferrite based layered composites under different boundary conditions. 2006,	1
1029	A 2-D Composite Medium Exhibiting Broadband Negative Permittivity and Permeability. 2006,	6
1028	Direct observation of negative phase velocity and positive group velocity in time domain for composite right/left-handed transmission lines. 2006, 100, 113503	14
1027	Compact Left-handed Dual Mode Notch Bandstop Filter. 2006,	4
1026	Forbidden resonant transmission through a metallic Fabry-Perot cavity with the left handed material. 2006,	
1025	Retroreflective effect on a right angle left-handed media prism. 2006, 73, 036620	2
1024	Strong focusing properties and far-field focus in the two-dimensional photonic-crystal-based concave lens. 2006, 74, 016610	8
1023	Subwavelength fractional Talbot effect in layered heterostructures of composite metamaterials. 2006, 74, 036612	6
1022	Photonic crystal lens: from negative refraction and negative index to negative permittivity and permeability. 2006, 97, 073905	76
1021	Large enhancement of interface second-harmonic generation near the zero-n(-) gap of a negative-index Bragg grating. 2006, 73, 036603	16
1020	Single superconducting split-ring resonator electrodynamics. 2006, 88, 264102	44
1019	Resonant modes in continuous metallic grids over ground and related spatial-filtering applications. 2006, 99, 083102	20
1018	Experimental study of photonic crystals consisting of E-negative and mu-negative materials. 2006, 74, 056615	58
1017	Second-harmonic generation at angular incidence in a negative-positive index photonic band-gap structure. 2006, 74, 026608	17
1016	All-angle negative refraction for surface plasmon waves using a metal-dielectric-metal structure. 2006, 96, 073907	158
1015	Conductivity and permittivity of two-dimensional metallic photonic crystals. 2006, 96, 063903	18

1014	All-angle negative refraction and evanescent wave amplification using one-dimensional metallodielectric photonic crystals. 2006 , 89, 151102	46
1013	Observation of Brewster's effect for transverse-electric electromagnetic waves in metamaterials: Experiment and theory. 2006 , 73,	28
1012	Synthesis of Metamaterial Coatings for Cylindrical Structures by an Ant-Colony Optimization Algorithm.	2
1011	Enhanced localization of Dyakonov-like surface waves in left-handed materials. 2006 , 74,	20
1010	Influence of the layer thickness on the magnetic response in perforated metal/dielectric/metal trilayer metamaterial. 2006 ,	
1009	Negative refraction and focusing by a left-handed material slab in free space. 2006 ,	
1008	Investigation on Transparency Phenomenon Induced by Metamaterials. 2006 ,	
1007	Surface plasmon polaritons in generalized slab heterostructures with negative permittivity and permeability. 2006 , 73,	60
1006	Negative refractions in uniaxially anisotropic chiral media. 2006 , 73,	64
1005	Optical experiments on second-harmonic generation from metamaterials consisting of split-ring resonators. 2006 ,	
1004	Influence of surface termination morphologies on the imaging properties of a composite two-dimensional photonic crystal lens. 2006 , 100, 053702	7
1003	Correlation length and negative phase velocity in isotropic dielectric-magnetic materials. 2006 , 100, 063533	16
1002	Aberration-free negative-refractive-index lens. 2006 , 88, 071119	8
1001	Slab-thickness dependence of polarization change of terahertz waves transmitted through metal hole arrays. 2006 , 99, 016105	4
1000	Efficiency Analysis of a Novel FMM-CG-FFT Algorithm for Full-Wave Simulation of Finite-Sized Periodic Structures. 2006 ,	
999	A Plane Wave Scattering by a LHM Anisotropic Uniaxial-coated Conducting Sphere. 2006 ,	
998	Numerical Characterization of Left-Handed Metamaterials using Hardware-Based Simulation Platforms. 2006 ,	
997	. 2006 ,	

996	Guided-wave characteristics of coplanar waveguide metamaterials composed of unsymmetrical unit cells. 2006,	
995	Pat-shape Left-handed Material and Relative Band-width of Analogous Metamaterials. 2006,	1
994	Superluminal group velocity in an anisotropic metamaterial. 2006, 74, 1081-1087	20
993	Current and Future Trends in Military Electronic Warfare Systems and the Role of Thin Films and Related Materials. 2006, 342, 151-161	2
992	Spatial-Filtering Microwave Devices Using Metallic Anisotropic Grids Over Ground. 2006,	1
991	Synthesis of Double-Negative Materials by using Dielectric-Loaded Rectangular Waveguides. 2006,	
990	An left handed material on Si CMOS chip with wafer level package process. 2006,	
989	Dielectric response of perforated two-dimensional lossy heterostructures: A finite-element approach. 2006, 100, 094103	27
988	ISOTROPIC NEGATIVELY-REFRACTING ATOMIC-VAPOR MEDIUM. 2007, 21, 717-728	5
987	Tm Wave Coupling for High Power Generation and Transmission in Parallel-Plate Waveguide. 2007, 21, 947-961	5
986	CHARACTERISTIC OF SURFACE WAVES IN NONLINEAR LEFT HANDED [PHOTOSENSITIVE SEMICONDUCTOR WAVEGUIDE STRUCTURE. 2007, 21, 5319-5329	1
985	Plasmonics: Fundamentals and Applications. 2007,	4591
984	NEGATIVE PHASE VELOCITY IN NONLINEAR OSCILLATORY SYSTEMS [MECHANISM AND PARAMETER DISTRIBUTIONS. 2007, 21, 4170-4177	6
983	Negative index bands in sub-wavelength metallic gratings. 2007,	
982	Bandstop Filter Base on Composite right/left-handed (CRLH) Transmission Line. 2007,	
981	Stacking of Negative Refractive Index Cut-Wire Pair Configuration in a Waveguide Environment. 2007,	
980	Undesired Reflection from Matched DNG Slab in RC-FDTD Analysis and Its Improving Method. 2007,	0
979	Free space measured loss comparison of single and double Ring resonators for negative index media. 2007,	

- 978 Fundamental causality and a criterion of negative refraction with low optical losses. **2007**, 1
- 977 Image inversion and magnification by negative index prisms. **2007**,
- 976 Meta materials in future wireless communication equipments. **2007**,
- 975 Negative index metamaterial for two distinct polarizations: Double negative at 813 nm and single negative at 770 nm. **2007**,
- 974 Design of microstrip highpass filters with complementary split ring resonators. **2007**, 43, 35 11
- 973 Active metamaterials: A novel approach to manipulate terahertz waves. **2007**,
- 972 Silver Nanowire Cluster Photonic Crystal Exhibits Negative Permeability. **2007**, ThBPDP7
- 971 The properties of photon tunnelling in a frustrated total internal reflection structure with an indefinite metamaterial slab. **2007**, 9, 253-259 4
- 970 Metamaterials and the Control of Electromagnetic Fields. **2007**, CMB2 7
- 969 Dispersion effects in light pulses refracted from right- to left-handed media. **2007**,
- 968 Terahertz metamaterials for active, tunable, and dynamic devices. **2007**, 1
- 967 Negative Refraction and Near-Field Imaging of an Elliptical-Rod Photonic Crystal Slab in the Second Band. **2007**, 24, 2675-2677 1
- 966 Subwavelength Imaging in a One-Dimensional Metal-Dielectric Structure. **2007**, 24, 3539-3542 3
- 965 Electrodynamical Analysis of Dissipative Electromagnetic Materials Based on Fractional Derivative. **2007**, 24, 847-850 1
- 964 Parametric amplification in coupled magnetoinductive waveguides. **2007**, 40, 6879-6887 28
- 963 Controlled coupling of planar waveguides using a negative-refractive-index medium. **2007**, 40, 497-505 1
- 962 Thermal radiation in quasiperiodic photonic crystals with negative refractive index. **2007**, 19, 496212 9
- 961 An approach to achieving a negative index of refraction using coincident resonances. **2007**, 40, 1161-1166 1

960	Negative refraction in nonlinear wave systems. 2007 , 79, 34002	10
959	Reply to the Comment by B. Aktař 2007 , 77, 64007	1
958	Imaging Properties of a Rectangular-Lattice Metallic Photonic-Crystal Slab. 2007 , 24, 229-232	4
957	Effect of rotational randomness on focusing in a two-dimensional photonic-crystal flat lens. 2007 , 9, 101-107	9
956	Zero-band gaps of photonic crystals consisting of positive and negative index materials in microstrip transmission lines. 2007 , 40, 2579-2583	17
955	Metamaterial-based low-pass spatial filters for high-power lasers. 2007 , 6823, 114	
954	Optical metamaterials based on thin metal films: from negative index of refraction to enhanced transmission and to surface wave guidance. 2007 , 6638, 33	
953	Metamaterials and their THz applications. 2007 ,	
952	Frequency Response of Multilayer Media Comprised of Double-Negative and Double-Positive Slabs. 2007 , 24, 1242-1244	3
951	Isothermal plasma waves in a gravitomagnetic planar analog. 2007 , 24, 5495-5514	8
950	Analysis of Planar Distributed Two-dimensional(2-D) Left-handed (LH) Structures. 2007 ,	
949	Alternative approach to all-angle negative refraction in two-dimensional photonic crystals. 2007 , 76,	19
948	Bianisotropic route to the realization and matching of backward-wave metamaterial slabs. 2007 , 75,	43
947	Effect of measured distance and angle tuning on transmission properties of split-ring resonators. 2007 , 91, 111905	1
946	Tunable plasmonic-crystal superlens for subwavelength imaging. 2007 , 76,	4
945	Size reduction in microstrip antennas using left-handed materials realized by complementary split-ring resonators in ground plane. 2007 ,	9
944	Negative Index Bands in Sub-wavelength Metallic Gratings. 2007 ,	
943	Design and Simulation of a Terahertz Negative Permeability Metamaterial with Connected Metallic Discs. 2007 ,	1

942	Superlens from metal-dielectric composites of nonspherical particles. 2007 , 76,	28
941	Ladder-type circuits revisited. 2007 , 28, 277-288	5
940	Surface polaritons on left-handed spheres. 2007 , 76,	8
939	Hollow nano-magnetic resonators mediated by photothermal effects: Towards the realization of highly-tunable mid-infrared negative permeability. 2007 ,	
938	Magnetic excitation of magnetic resonance in metamaterials at far-infrared frequencies. 2007 , 91, 113118	13
937	Metamaterials - Negative Indices with Positive Benefits?. 2007 ,	
936	Influence of unit cell rotated on the focusing in a two-dimensional photonic-crystal-based flat lens. 2007 , 101, 123112	1
935	A Planar Integrated Left-Handed Microstrip Line Formed by Linearly Placed Spiral Elements. 2007 ,	
934	Acceleration of Fast Multipole Method for Large-Scale Periodic Structures With Finite Sizes Using Sub-Entire-Domain Basis Functions. 2007 , 55, 414-421	28
933	. 2007 , 55, 355-363	5
932	Scattering of electromagnetic waves in metamaterial superlattices. 2007 , 90, 201919	20
931	Hollow Nano-Magnetic Resonators Mediated by Photo-Thermal Effects: Towards the Realization of Highly-Tunable Mid-Infrared Negative Permeability. 2007 ,	
930	Tunable negative refraction without absorption via electromagnetically induced chirality. 2007 , 99, 073602	114
929	Two-peak property in asymmetric left-handed metamaterials. 2007 , 101, 023702	9
928	The influence of granularity on the subwavelength performance of a negative refractive index lens. 2007 ,	
927	Volumetric negative-refractive-index metamaterials based upon the shunt-node transmission-line configuration. 2007 , 102, 094903	10
926	An Analysis of Dispersive Material by CIP (Cubic-Interpolated Pseudo-Particle) scheme. 2007 ,	
925	Three-dimensional left-handed material lens. 2007 , 91, 104103	3

924	Wideband backward coupling based on anisotropic left-handed metamaterial. 2007 , 90, 043506	10
923	Large finite-difference time domain simulations of a left-handed metamaterial lens with wires and resonators. 2007 , 91, 154102	3
922	Negative Index Metamaterial for Two Distinct Polarizations: Double Negative at 813 nm and Single Negative at 770 nm. 2007 ,	
921	Resonant crystal band gap metamaterials in the microwave regime and their exotic amplification of evanescent waves. 2007 , 90, 091912	7
920	Routes to left-handed materials by magnetoelectric couplings. 2007 , 75,	38
919	Construction of a polarization insensitive lens from a quasi-isotropic metamaterial slab. 2007 , 75, 026601	19
918	Experimental verification of a tunable optical negative refraction in nematic liquid crystals. 2007 , 90, 181931	18
917	Metamaterial of rod pairs standing on gold plate and its negative refraction property in the far-infrared frequency regime. 2007 , 75, 016604	31
916	Realization of a super waveguide for high-power-density generation and transmission using right- and left-handed transmission-line circuits. 2007 , 76, 036602	4
915	Metamaterial with simultaneously negative bulk modulus and mass density. 2007 , 99, 093904	385
914	Enhanced backward wave propagation in evanescent waveguides loaded with split ring resonators. 2007 , 102, 044902	4
913	Resonant condition of unitary dendritic structure with overlapping negative permittivity and permeability. 2007 , 91, 181908	53
912	Surface resonant states and superlensing in acoustic metamaterials. 2007 , 75,	175
911	Magnetic resonances in metallic double split rings: Lower frequency limit and bianisotropy. 2007 , 90, 041903	12
910	Imaging and Localization Properties of LHM Superlens Excited by 3D Horizontal Electric Dipoles. 2007 , 21, 35-46	8
909	Local-field effects in magnetodielectric media: Negative refraction and absorption reduction. 2007 , 76,	19
908	Mie Series Study on Electromagnetic Scattering of Metallic Sphere Covered by Double-negative Metamaterials. 2007 ,	
907	Subwavelength discrete solitons in nonlinear metamaterials. 2007 , 99, 153901	166

906	Three-dimensional nanotransmission lines at optical frequencies: A recipe for broadband negative-refraction optical metamaterials. 2007 , 75,	79
905	Three-dimensional light focusing in inverse opal photonic crystals. 2007 , 75,	23
904	Design of negative-refractive-index materials on the basis of rods with a gradient of the dielectric constant. 2007 , 91, 081103	8
903	Surface-plasmon-induced optical magnetic response in perforated trilayer metamaterial. 2007 , 76, 016606	16
902	Left-handed interfaces for electromagnetic surface waves. 2007 , 98, 073901	59
901	Metamaterials-based Routing Devices for Space Applications. 2007 ,	1
900	Experimental investigation of mu negative of Bragg gap in one-dimensional composite right/left-handed transmission line. 2007 , 102, 033711	7
899	Double bands of negative refractive index in the left-handed metamaterials with asymmetric defects. 2007 , 90, 011911	34
898	Subwavelength resolution with a negative-index metamaterial superlens. 2007 , 90, 254102	150
897	Negative refraction and focusing in magnetically coupled L-C loaded transmission lines. 2007 , 102, 086104	4
896	Scattering of elastic waves by elastic spheres in a NaCl-type phononic crystal. 2007 , 75,	15
895	Left-handed materials made of dilute ferromagnetic wire arrays with gyrotropic tensors. 2007 , 102, 023106	10
894	Intrinsic electrostatic resonances of heterostructures with negative permittivity from finite-element calculations: Application to core-shell inclusions. 2007 , 102, 094104	12
893	Three wave interaction in negative refractive index materials with quadratic nonlinearity. 2007 ,	
892	Tuneable visible resonances in crescent shaped nano-split-ring resonators. 2007 , 91, 093109	47
891	Focusing properties of near-field time reversal. 2007 , 76,	30
890	A Novel Compact Left-Handed Transmision Line With Improved Split-Ring Resonators. 2007 ,	3
889	Active left-handed material collaborated with microwave varactors. 2007 , 91, 164101	38

- 888 Compact integrated MMIC left-handed bandpass filter. **2007**,
- 887 Negative principal refractive indices and accidental isotropy in two-dimensional photonic crystals with an asymmetrical unit cell. **2007**, 76,
- 886 Non-left-handed transmission and bianisotropic effect in a E-shaped metallic metamaterial. **2007**, 75, 41
- 885 Collective electronic states in inhomogeneous media at critical and subcritical metal concentrations. **2007**, 75, 2
- 884 Field polarization transformation by bodies with negative refractive index. **2007**,
- 883 Photonic Metamaterials. **2007**, 2
- 882 Metamaterials for Novel Terahertz and Millimeter Wave Devices. **2007**,
- 881 Design and simulation of a terahertz negative permeability metamaterial with connected metallic discs. **2007**,
- 880 Tuning the effective properties of metamaterials by changing the substrate properties. **2007**, 101, 014909 57
- 879 Negative refraction in mid-infrared semiconductor metamaterials. **2007**, 4
- 878 Epitaxial (SrTiO₃/NiO)_n/MgO multiferroic heterostructure. **2007**, 25, 37-41 3
- 877 A printed-circuit implementation of a broadband volumetric negative-refractive-index medium. **2007**, 2
- 876 Plasmon-assisted photonics at the nanoscale. **2007**, 1, 012501 55
- 875 Eigenfunctional representation of dyadic Green's functions in multilayered gyrotropic chiral media. **2007**, 40, 5751-5766 8
- 874 Experimental study of subwavelength focusing by left-handed metamaterials with a negative refractive index. **2007**, 1, 011695 1
- 873 On the possibility of gain control and special solitons in metamaterials. **2007**,
- 872 Fabrication, Properties and Theoretical Simulation of Multi-Layer Ceramic Structure Meta-Materials. **2007**, 336-338, 571-573
- 871 Smooth Ag Film Deposited Using e-beam Evaporated Ge as an Intermediate Layer for Applications in Nanoscale Devices and Optical Superlens. **2007**, 990, 1

- 870 Frequency bands of negative refraction in finite one-dimensional photonic crystals. **2007**, 16, 173-178 12
- 869 Negative Refraction and Left-Handedness in 2D Archimedean Lattice Photonic Crystals. **2007**, 555, 83-88 2
- 868 Waveguiding in air with left-handed material. **2007**,
- 867 Total transmission condition for photon tunnelling in a layered structure with metamaterials. **2007**, 9, 60-65 8
- 866 Surface Deformation of Metal Films Under Controlled Pressure for Generating Ultra-flat Metal Surfaces. **2007**, 990, 1
- 865 MAGNETOSTATIC SURFACE WAVES IN FERRITE-NONLINEAR NONMAGNETIC NEGATIVE PERMITTIVITY MATERIAL STRUCTURE. **2007**, 21, 1951-1960 3
- 864 FOUR-WAVE MIXING IN LEFT-HANDED MATERIALS. **2007**, 16, 485-496 4
- 863 Simultaneous negative permittivity and permeability in a coherent atomic vapour. **2007**, 16, 1976-1985 4
- 862 Bilayer metamaterial: analysis of left-handed transmission and retrieval of effective medium parameters. **2007**, 9, S361-S365 17
- 861 Doubly negative metamaterials with subwavelength unit cells in visible and near infrared. **2007**,
- 860 The Electrodynamics of Left-Handed Media. 1-41
- 859 Synthesis of Bulk Metamaterials. 43-118
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- 857 Negative refraction of a three-dimensional metallic photonic crystal. **2007**, 39, 27-32 3
- 856 On the role of the losses in metamaterials. **2007**,
- 855 Applications of negative-refractive-index transmission-line (NRI-TL) metamaterials in planar antennas and their feed networks. **2007**, 1
- 854 Negative refraction via domain wall resonances in a homogeneous mixture of ferro- and nonmagnetic substances. **2007**, 19, 072203 2
- 853 Tunable refractive index materials with metallic nano-spheres dispersed in organic liquids. **2007**, 2

852	Terahertz metamaterial devices. 2007 ,	3
851	Near-field imaging through plasmonic superlenses. 2007 ,	1
850	Silvered three-dimensional polymeric photonic crystals having a large mid-infrared stop band. 2007 ,	
849	Wave propagation in self-waveguiding and negative refracting photonic crystals. 2007 ,	
848	Effective properties of a photonic crystal with air hole in multilayer dielectric structure. 2007 ,	
847	Enlargement of omnidirectional reflection range in one-dimensional staggered photonic crystals containing negative refraction medium. 2007 ,	
846	Analytical prediction of dispersion characteristics for slab waveguides composed with left handed materials. 2007 ,	
845	Echo response of nonlinear thin film of meta-atoms. 2007 ,	
844	Semiclassical theory of hyperlensing and cloaking. 2007 ,	
843	Optical hyperlens: far-field imaging beyond the diffraction limit. 2007 ,	
842	Goos-H�nchen shift in anisotropic left-handed materials. 2007 ,	
841	The role of dispersive magnetic permeability in ultrashort electromagnetic pulse propagation in nonlinear metamaterials. 2007 ,	
840	Impact of combined electric response on left-handed materials. 2007 , 80, 37006	1
839	Tunable negative refraction based on the Pockels effect in two-dimensional photonic crystals composed of electro-optic crystals. 2007 , 101, 013516	15
838	Negative-index metamaterial at 780 nm wavelength. 2007 , 32, 53-5	581
837	Dual-band negative index metamaterial: double negative at 813 nm and single negative at 772 nm. 2007 , 32, 1671-3	160
836	Rabi splitting with excitons in effective (near) zero-index media. 2007 , 32, 1980-2	19
835	Manipulating electromagnetic radiation with magnetic photonic crystals. 2007 , 32, 2288-90	10

834	Self-assembling of submicrometer three-dimensional photonic crystals in concave microzones etched on silicon substrates. 2007 , 24, 231-5	
833	Optical properties of a square-lattice photonic crystal within the partial bandgap. 2007 , 24, 379-84	3
832	Image inversion and magnification by negative index prisms. 2007 , 24, A45-51	6
831	Semiclassical theory of the hyperlens. 2007 , 24, A52-9	60
830	Rigorous electromagnetic analysis of volumetrically complex media using the slice absorption method. 2007 , 24, 3123-34	4
829	Frequency dependence of the magnetic response of split-ring resonators. 2007 , 24, 510	36
828	Omnidirectional gaps of one-dimensional photonic crystals containing indefinite metamaterials. 2007 , 24, 2033	28
827	Creating stable gain in active metamaterials. 2007 , 24, A53	38
826	Nano-optical waveguide modes in gaps embedded in left-handed metamaterial. 2007 , 24, A62	7
825	Negative refraction and sub-wavelength focusing in the visible range using transparent metallo-dielectric stacks. 2007 , 15, 508-23	129
824	Complementary planar terahertz metamaterials. 2007 , 15, 1084-95	247
823	Modulating and tuning the response of metamaterials at the unit cell level. 2007 , 15, 1115-27	104
822	Negative refraction imaging in a hybrid photonic crystal device at near-infrared frequencies. 2007 , 15, 1286-91	16
821	Group theoretical description of artificial electromagnetic metamaterials. 2007 , 15, 1639-46	74
820	Near-infrared metamaterials with dual-band negative-index characteristics. 2007 , 15, 1647-52	49
819	Refocusing of backscattered microwaves in target detection by using LHM flat lens. 2007 , 15, 3312-7	21
818	Liquid crystal clad near-infrared metamaterials with tunable negative-zero-positive refractive indices. 2007 , 15, 3342-7	146
817	Collimations and negative refractions by slabs of 2D photonic crystals with periodically-aligned tube-type air holes. 2007 , 15, 3519-30	7

816	Experiments on second- and third-harmonic generation from magnetic metamaterials. 2007 , 15, 5238-47	196
815	Towards -1 effective index with one-dimensional metal-dielectric metamaterial: a quantitative analysis of the role of absorption losses. 2007 , 15, 7720-9	19
814	Negative refractions in two-dimensional photonic crystals formed by holographic lithography. 2007 , 15, 8003-9	3
813	Polarized left-handed extraordinary optical transmission of subterahertz waves. 2007 , 15, 8125-34	20
812	Calculation of effective permittivity, permeability, and surface impedance of negative-refraction photonic crystals. 2007 , 15, 8340-5	25
811	A new mechanism for negative refraction and focusing using selective diffraction from surface corrugation. 2007 , 15, 9166-75	16
810	Low-loss single-layer metamaterial with negative index of refraction at visible wavelengths. 2007 , 15, 9320-5	20
809	Forward- and backward-propagating Cerenkov radiation in strong chiral media. 2007 , 15, 9793-8	6
808	Resonance hybridization in double split-ring resonator metamaterials. 2007 , 15, 12095-101	81
807	Negative beam displacements from negative-index photonic metamaterials. 2007 , 15, 14219-27	20
806	Fabrication and characterization of three-dimensional copper metallodielectric photonic crystals. 2007 , 15, 18283-93	30
805	Microwave-Frequency Experiments Validate Optical Simulation Tools and Demonstrate Novel Dispersion-Tailored Photonic Crystal Waveguides. 2007 , 25, 2502-2510	8
804	Focusing beyond the diffraction limit with far-field time reversal. <i>Science</i> , 2007 , 315, 1120-2	33-3 454
803	Antenna applications of negative-refractive-index transmission-line structures. 2007 , 1, 12	43
802	. 2007 , 55, 882-891	32
801	Analysis of guided and leaky waves excited by an infinite line source in metamaterial substrates. 2007 , 1, 129	
800	Enabling RF/microwave devices using negative-refractive-index transmission-line (NRI-TL) metamaterials. 2007 , 49, 34-51	42
799	. 2007 , 55, 2258-2267	225

798	Metamaterials - A Challenge for Contemporary Advanced Technology. 2007 ,	0
797	Left-handed metamaterials: The fishnet structure and its variations. 2007 , 75,	277
796	Tunable negative refractive index metamaterial phase shifter. 2007 , 43, 1440	18
795	Light scattering by an ensemble of interacting dipolar particles with both electric and magnetic polarizabilities. 2007 , 76,	46
794	FDTD Study on Scattering of Metallic Column Covered by Double-Negative Metamaterial. 2007 , 21, 1905-1914	35
793	. 2007 , 55, 868-876	249
792	Radiation Characteristics of a Microstrip Patch Over an Electromagnetic Bandgap Surface. 2007 , 55, 1691-1697	63
791	Physical implementation of a generalized NRI-TL medium for quad-band applications. 2007 ,	7
790	Enabling RF/Microwave Devices and Antennas using Negative-Refractive-Index Transmission-Line (NRI-TL) Metamaterials. 2007 ,	2
789	Contemporary notes on metamaterials. 2007 , 1, 3	91
788	Bloch wave approach to the design of optimally matched non-effective medium composite right/left handed transmission lines. 2007 , 1, 50	8
787	Broadband transmission below the cutoff frequency of a waveguide loaded with resonant scatterer arrays. 2007 , 1, 165	13
786	Evanescent surface-wave modes in a slab with application to miniaturised waveguide components. 2007 , 1, 144	1
785	Microwave focusing and beam collimation using negative index of refraction lenses. 2007 , 1, 108	11
784	Left-handed L-band notch bandstop filter with significantly reduced size. 2007 , 1, 45	4
783	Low loss guided wave propagation in a left-handed microstrip structure using dispersive split ring/coupled combination metamaterial. 2007 , 1, 887	4
782	Design of two-dimensional photonic crystal structure based in all-angle negative refractive effect for application in focusing systems. 2007 , 1, 91-95	2
781	Periodic layered waveguide with negative index of refraction. 2007 , 90, 082506	10

780 Negative refraction in random photonic alloys of polaritonic and plasmonic microspheres. **2007**, 75, 56

779 Negative refraction at visible frequencies. *Science*, **2007**, 316, 430-2 33-3 447

778 Left-Handed Dipole Antennas and Their Implementations. **2007**, 55, 1246-1253 55

777 Compact Negative-Refractive-Index Transmission-Line (NRI-TL) coupler, filter and diplexer. **2007**, 4

776 Experimental investigation of reflection characteristics of left-handed metamaterials in free space. **2007**, 1, 89 8

775 Radar Absorbing Applications of Metamaterials. **2007**, 4

774 Spatial-Dispersion Effects in One-Dimensional Photonic Crystals with Metallic Inclusions. **2007**,

773 Plasmonic Nanoantennas. **2004**, 135-135

772 Negative Refractive Index Materials. **2004**, 489-522

771 New Optics Using Negative Refraction. **2005**,

770 Black holes bend light the 'wrong' way.

769 Periodic Structures. 1

768 Left-Handed Materials for Microwave Devices and Circuits.

767 Nanofabrication of planar split ring resonators for negative refractive index metamaterials in the infrared range. **2006**, 71, 695-703 0

766 Second Harmonic Generation at Angular Incidence in a Negative/Positive Index Photonic Band Gap Structure. **2006**,

765 Observation of magnetoinductive waves in metamaterials. **2006**,

764 Chapter 5 Surface plasmons and gain media. **2006**, 141-169

763 Negative Refraction and Subdiffraction Imaging. **2006**, 483-491

762 Dynamical Electric Metamaterial Response at Terahertz Frequencies. **2006,**

761 Second-harmonic generation in left-handed metamaterials. **2006,**

760 Photo-induced voltage across negative index metamaterials. **2006,**

759 Design, Fabrication, and Application of Three Dimensional Dispersion Engineered Photonic Crystal Devices. **2006,**

758 Ring-shaped molecules as split ring resonators of a molecular metamaterial. **2006,**

757 Chapter 9 Thin metal-dielectric nanocomposites with a negative index of refraction. **2006,** 271-308

756 Negative refraction, imaging, beam collimation and subwavelength concentration in photonic crystals. **2006,**

755 All-angle negative refraction for surface plasmon waves using a metal-dielectric-metal structure. **2006,**

o

754 Thermal Properties of Bio-inspired Materials. **2006,** 27, 86-89

753 Optical experiments on second-harmonic generation with metamaterials composed of split-ring resonators. **2006,**

752 Chemical route prepared magnetic structure at infrared frequencies. **2006,**

751 Dynamical Electric Metamaterial Response at Terahertz Frequencies. **2006,**

750 Nano Optical Modes of Gap Structure in a Left-Hand-Metamaterial Waveguide. **2006,**

749 Characteristics of Nonlinear Tm Surface Waves in an Interface of Antiferromagnet and Left-handed Metamaterial Structure. **2006,** 6, 2325-2328

748 Dynamically Frequency Tunable Terahertz Metamaterials. **2007,**

747 Quasi-Phase-Matching with Simultaneously Electronic and Magnetic Nonlinear Response in Metamaterials. **2007,**


746 Double Negative Index Metamaterial: Simultaneous Negative Permeability and Permittivity at 812 nm. **2007,**

745 Nonlinearities in Negative Refractive Index Media. **2007,**

- 744 Evaluation of Effective Electric Permittivity and Magnetic Permeability in Metamaterial Parallel Slab and Importance of the skin effect. **2007**,
- 743 Superlenses bring the nanoworld into focus.
- 742 Accelerated Design Tools for Nanophotonic Devices and Applications. **2007**, 29-1-29-22
- 741 Design and Applications of Photonic Crystals. **2007**, 25-1-25-40
- 740 Defect and Band Gap Analysis of Real One-Dimensional Layers of Right and Left Handed Photonic Crystals. **2007**, 7, 3499-3505
- 739 References. **2008**, 413-479
- 738 Anomalous propagations of electromagnetic waves in uniaxial metamaterials with a unique dispersion relation. **2008**,
- 737 Evolution of Plasmonic Metamaterials. **2008**, 36, 128-133 1
- 736 Site-selective metal coating and its application to 3D functional devices. **2008**, 36, 174-175
- 735 Negative Refraction in a Semiconductor Metamaterial in the Mid-Infrared. **2008**,
- 734 A Study on Critical Angle of Metamaterial with Drude Model. **2008**, 19, 1020-1027
- 733 High-Gain Fabry-Pérot Cavity Antenna with Planar Metamaterial Superstrate for Wipro Base Station Antennas. **2008**, 19, 1367-1374 1
- 732 Analysis of Multilayer Slab with Lossy Metamaterials. **2008**, 19, 1384-1393 1
- 731 About the feasibility of nearfield-farfield transformers based on optical metamaterials. **2009**, 1-9
- 730 Active Terahertz Metamaterials. **2009**,
- 729 Dynamic Metamaterials at Terahertz Frequencies. **2009**, 645-647
- 728 Controlled zero- n bandgaps in negative refraction photonic superlattices for wavefront control and open resonances. **2009**,
- 727 Propagation of Light. **2009**,

- 726 Circuit Model of Gain in Metamaterials. **2010**, 259-272 0
- 725 General Theory on Artificial Metamaterials. **2010**, 49-59 0
- 724 Rapid Design for Metamaterials. **2010**, 61-85
- 723 The Dynamical Study of the Metamaterial Systems. **2010**, 183-214
- 722 Compensated Anisotropic Metamaterials: Manipulating Sub-wavelength Images. **2010**, 155-181
- 721 Analysis of Resonant MTM-TL Using Transmission Line Theory and Its Applications. **2009**, 20, 1091-1096
- 720 Broadband and Low-Loss Non-Resonant Metamaterials. **2010**, 87-97 1
- 719 Experiments and Applications of Metamaterials in Microwave Regime. **2010**, 321-355
- 718 Wave localization in one-dimensional periodic-on-average disordered system composed of single-negative metamaterials. **2010**, 59, 7066 4
- 717 Broadband lefthanded metamaterial absorber based on split ring resonator and wire array. **2010**, 59, 6084 3
- 716 Efficient Modelling Method for Artificial Materials Using Digital Filtering Techniques and EMC Applications. **2010**, E93-B, 1760-1767 1
- 715 Transmission line analogy model of left-handed metamaterials microstructure configuration. **2010**, 59, 8566 4
- 714 Tunability in metamaterials with mechanical rotation. **2010**, 59, 8574 2
- 713 Octagonal split resonant rings composite metal-wires to realize negative refraction. **2010**, 59, 5444 1
- 712 TE Volume Modes in Anisotropic Single-Negative Slab with Negative Component in Permeability Tensor. **2010**, E93-C, 81-84
- 711 Radiative Coupling in Planar Metamaterials Studied by THz Time-Domain Spectroscopy. **2010**,
- 710 Fabrication of Cubic Micron-Scale 3D Metamaterial Resonators. **2010**,
- 709 Search for Negative Refraction in the Visible Region of Light by Fluorescent Microscopy of Quantum Dots Infiltrated into Regular and Inverse Synthetic Opals. **2010**, 65-76

- 708 Planar focus effect of visible light metamaterials. **2010**, 59, 4023 2
- 707 Experimental verification of left-handed metamaterials composed of electric and magnetic resonators. **2010**, 59, 1847 0
- 706 Analysis of the Cylindrical Metamaterial Slab Using the Higher Order-mode Finite Difference Time Domain Method. **2010**, 14, 38-44
- 705 Numerical study on 2-D photonic crystal with negative refractive index at multiple frequency bands. **2010**, 59, 5553 2
- 704 Design and experimental verification of a new type left-handed metamaterial structure. **2010**, 59, 4602 0
- 703 Dendritic metamaterial absorber based on the impedance matching. **2010**, 59, 6078 8
- 702 Molding the Flow of Light with Artificial Optical Materials. **2010**,
- 701 Solitary waves in a nonlinear oppositely directed coupler. **2010**, 104, 253
- 700 Photonic crystals. **2010**, 53, 121
- 699 Experimental Investigation of $R(\omega)$, $T(\omega)$ and $L(\omega)$ for Multi-Layer SRRs and Wires Metamaterials. **2010**, 10, 186-189 1
- 698 Numerical study of effect of geometrical parameters on the passband of left-hand material. **2011**, 60, 107804
- 697 Quantized Energy Momentum and Wave for an Electromagnetic Pulse A Single Photon inside Negative Refractive Indexed Media. **2011**, 02, 1507-1522
- 696 Numerical study of three-dimensional isotropic left-handed metamaterials at visible frequencies. **2011**, 60, 044101 3
- 695 A two-dimensional broad pass-band left-handed metamaterial based on single-sided metallic structure. **2011**, 60, 024101 8
- 694 Acoustic metamaterial with split hollow spheres. **2011**, 60, 044301 9
- 693 Design of a wide-band metamaterial absorber based on resistance films. **2011**, 60, 087802 11
- 692 Defect mode in one-dimensional photonic crystal consisting of single-negative materials with an impurity layer. **2011**, 60, 094101 5
- 691 Electric tunability of microwave permeability dispersion behaviors of metamaterials. **2011**, 60, 117501

- 690 Anomalous refractive effects in photonic crystals formed by holographic lithography. **2011**,
- 689 Investigation of Negative Refraction Phenomenon for Au Nanowires Array Tuning with Index of Filling Material. **2011**, 02, 1429-1435
- 688 Terahertz Metamaterial Structures Fabricated by PolyMUMPs. **2011**, 145-150
- 687 Visible light metamaterials based on the double-fishnet structure. **2011**, 60, 054211 2
- 686 Sub-wavelength imaging of the two-dimensional photonic crystal with effective index close to -1. **2011**, 60, 054201 1
- 685 Selectable electromagnetic response modes and negative refraction in rectangular dielectric metamaterials. **2011**, 60, 054102
- 684 Simulation of a metamaterial beam for mechanical wave absorption. **2011**, 60, 034302 3
- 683 The design of a quasi-omnidirectional tabulate metamaterial absorber. **2011**, 60, 037801
- 682 Extraction algorithm for retrieving the effective constitutive parameters of metamaterials based on TE₁₀ rectangular waveguide. **2011**, 60, 059204 4
- 681 Magnetic metamaterial based on connected split and closed rings. **2011**, 60, 084104
- 680 Design and simulation of chiral negative refractive structure based on folded-wire. **2011**, 60, 114101 3
- 679 A polarization-insensitive and double-face-absorption chiral metamaterial absorber. **2011**, 60, 107801 5
- 678 Propagation in LHM Slab Loaded Rectangular Waveguide. **2011**, 59-65
- 677  **2011**, 84-99
- 676 PMC-Based Waveguide-Fed Slot Array. **2011**, 2011, 1-5
- 675 Engineered Self-Organized Microstructures Using Directional Solidification of Eutectics. 183-196
- 674 A Dual-band Balanced Amplifier Using Meta-material Transmission Line. **2011**, 60, 2305-2310
- 673 Photon Generation in Electronic Transitions: Lasers and Nanoscopic Sources. **2012**, 67-110

672	Design of a low-frequency broadband metamaterial absorber based on resistance frequency selective surface. 2012 , 61, 134102	10
671	Design and optimization of left-handed materials with specific frequency bands. 2012 , 61, 054103	
670	Chiral Current in a Graphene Battery. 2012 , 04, 426-431	2
669	Zero-index metamaterial based on double-negative structure. 2012 , 61, 084102	9
668	Chalcogenide glass as a nonlinear dielectric in a nonlinear metamaterial structure. 2012 ,	
667	Application of Metamaterials and Meta-Atoms to Terahertz Devices. 2012 , 40, 508	
666	. 2012 , 02, 28-33	
665	Research of subwavelength grating based on multilayer films structure. 2012 , 61, 104203	2
664	Design and simulation of a cross split ring lefthanded materials unit structure. 2012 , 61, 164101	3
663	Numerical simulation of leaf-shaped metamaterial absorber at infrared frequency. 2012 , 61, 144203	2
662	Basics of Meta-materials. 2012 , 78, 767-772	3
661	Propagation characteristics of time reversal pulsed electromagnetic waves in double negative materials. 2012 , 61, 074102	3
660	Influence of left-handed materials on the spontaneous emission spectrum of V-type three-level atom. 2012 , 61, 043203	2
659	Results and Discussion. 2012 , 63-205	
658	Design of a thin wide-band absorber based on metamaterials and resistance frequency selective surface. 2012 , 61, 134101	7
657	Terahertz wave filter based on metamaterial. 2012 ,	
656	Three-dimensional Negative Index of Refraction in the Ultraviolet. 2012 ,	
655	Properties of photonic quantum well structures containing left-handed materials. 2012 , 61, 134210	2

- 654 Isotropic negative permeability metamaterials and left-handed metamaterials based on miniature structure. **2012**, 61, 084103 3
- 653 Design of a wide-band and quasi-omnidirectional tabulate metamaterial absorber in the terahertz regime. **2012**, 30, 350-353 0
- 652 Design and Applications of Photonic Crystals. **2012**, 469-512
- 651 Resonance Properties of Metallic Ring Systems: A Single Ring. **2013**, 7-28
- 650 Electromagnetic Waves in Metallic Wire Structures. **2013**, 1-6
- 649 The Green Function and Optical Field Enhancement in a Multilayered Microsphere with Metamaterial. **2013**, 57-72
- 648 Discontinuous Galerkin Methods for Metamaterials. **2013**, 127-150
- 647 Study of Power Coefficient and Insertion Phase Shift for Organic Magnetic Slab. **2012**, 1, 277-282
- 646 Modeling and Analysis of Ladder-Network Transmission Lines with Capacitive and Inductive Lumped Elements. **2013**, 05, 213-218 1
- 645 Two-dimensional incident left-handed metamaterial composed of double Π -shaped metal strips. **2013**, 62, 074102 1
- 644 Simulation and experiment demonstration of a polarization-independent dual-directional absorption metamaterial absorber. **2013**, 62, 013701 6
- 643 Research of metamaterial absorbers and their rectangular waveguide matching terminal applications based on the electric resonators. **2013**, 62, 087801 1
- 642 Theoretical analysis of constitutive parameters for the periodic magnetic resonator metamaterials. **2013**, 62, 104105
- 641 The Metamaterial Approach [Permeability and Permittivity Engineering. 13-35
- 640 Electrodynamical Theory of Three-Dimensional Metamaterials of Hierarchically Organized Nanoparticles. **2013**, 119-141
- 639 Four Wave Mixing Propagation in Fishnet Metamaterials. **2013**,
- 638 Ultrafast control of near field coupling in terahertz metamaterials. **2013**,
- 637 Plasmonic Nanoparticle-Based Metamaterials: From Electric to Magnetic Response. **2013**, 327-365

- 636 New Negative Refractive Index Material Composed of Dielectric Prisms with Metal Patterns. **2013**, E96.C, 1273-1280 1
- 635 Ray optics calculation of axial force exerted by a highly focused Gaussian beam on a left-handed material sphere. **2013**, 62, 184201
- 634 Tunable split ring resonators in terahertz band. **2013**, 62, 064101 3
- 633 Near Field Authentication. **2013**, 244-267
- 632 Influence of the Metamaterial Geometry on Ultra-Strong Light-Matter Interaction. **2013**,
- 631 A Comparison of Active and Passive Metamaterials from Equivalent Lumped Elements Modes. **2013**, 03, 260-264 1
- 630 Creating Illusion Effects Using Transformation Optics. **2014**, 139-165
- 629 Design for Simplified Materials in Transformation Electromagnetics. **2014**, 117-137
- 628 Invisibility Cloak at Optical Frequencies. **2014**, 289-314
- 627 Transformation Electromagnetics for Cloaking, Lensing, and Radiation Applications. **2014**, 33-81
- 626 The electromagnetic propagation properties of metamaterials with double-inductance loading in unit cell. **2013**, 79-84
- 625 What Is the Universe Made of?. **2014**, 43-79
- 624 Simulation analysis of the depth of field characteristic of negative refraction flat lens. **2014**, 63, 134202
- 623 Research and design of thermal cloak with arbitrary shape based on Laplace's equation. **2014**, 63, 194402 6
- 622 Research and design of thermal concentrator with arbitrary shape based on transformation thermodynamics. **2014**, 63, 054401 1
- 621 Generation of Terahertz-waves using Ultrashort Electron Beams from a Photocathode Radio-frequency Gun Linac. **2014**, 134, 502-509
- 620 A novel dual-band left-handed metamaterials composed of multi-defects hexagonal structure. **2014**, 63, 014103 4
- 619 Creation of Chiral Copper Nano-Needle by Optical Vortex Pumping. **2014**, 42, 780

- 618 Design and preparation of a low frequency absorber based on hollowed-out cross-shaped meta-material structure. **2014**, 63, 184101 2
- 617 Enhanced Slow Wave through Dispersive Metamaterial Loaded Helical Guide: Analytical Study and Design. **2014**,
- 616 Subwavelength focusing of cylindrical vector beams by plano-concave lens based on one dimensional metallic photonic crystal. **2014**, 63, 237801 5
- 615 Research of the characteristics of photonic crystals based on air holes sub-wavelength imaging. **2014**, 63, 154212 0
- 614 Electrodynamics—Two Versions and One Problem. **2014**, 05, 449-457
- 613 Tailoring Nonlinear Interactions in Metamaterials. **2015**, 217-235
- 612 Background. **2015**, 1-17
- 611 Sensing the Dielectric Properties of Metals at THz Frequencies Using Inverse Symmetry Broken Metamaterials. **2015**,
- 610 Quantum Stealth Technology. **2015**, 03, 66-76
- 609 Interaction of Light with Solids. **2015**, 1-48
- 608 Theory of Transformation Optics in Antenna Design. **2015**, 1-17
- 607 Reconfigurable Antennas for Wireless Communications. **2015**, 1-38 1
- 606 From plasmon to nanoplasmonics-the frontiers of modern photonics and the role of liquid crystals in tuneable nanoplasmonics. **2015**, 64, 124214 3
- 605 Hermitian Formulation of a Plasmonic Band Theory for One-dimensional Plasmonic Crystals. **2015**, 135, 418-425
- 604 Double cross-shape broadband low-loss and small units left-handed metamaterials based design and experimental verification. **2015**, 64, 024102 2
- 603 Influence of left-handed material on the resonant frequency of resonant cavity. **2015**, 64, 124103
- 602 Research and design of directional heat transmission structure based on metamaterial. **2015**, 64, 084401 3
- 601 Rectifying electromagnetic waves by a single-layer dielectric particle array based on dual-particle coupling. **2015**, 64, 224201

- 600 Dirac-like cones at $k=0$. **2015**, 64, 184208 1
- 599 Multi-beam Antenna Arrays. **2015**, 1-34 0
- 598 Sound Blocking Using Acoustic Metamaterial Scaling. **2015**, 34, 371-376
- 597 Oppositely Directional Coupler: Example of the Forward Backward Waves Interaction in the Metamaterials. **2016**, 181-195
- 596 References. **2015**, 325-354
- 595 Analysis of stop-band FSS with all dielectric metamaterial. **2015**, 421-423
- 594 Fabrication of Metamaterial Absorbers in THz Region and Evaluation of the Absorption Characteristics. **2016**, 136, 172-179
- 593 Enhanced Microstrip Patch Antenna Using Metamaterial for DECT and Aircraft Wireless System Applications. **2016**, 171-177
- 592 Left-Handed Waveguide Using Cutoff TM-Mode. **2016**, E99.C, 61-67
- 591 Fabrication of Optical Attenuators for Optical Communication Based on Integration of Metal-Nanophotonic Resonators and Silicon Waveguides. **2016**, 44, 42
- 590 Introduction to Exotic World of Metamaterials. **2016**, 44, 5
- 589 Frequency Response of Split-Ring Resonators at Different Types of Excitations in Ka-Band. **2016**, 61, 44-49 0
- 588 Bibliography. **2016**, 89-99
- 587 Diffraction Compensation of Finite Beams in Hyperbolic Metamaterials. **2016**,
- 586 Microwaves in Structured Metamaterials: Supeluminal, Slow, and Backward Waves. **2016**, 61, 125-133 1
- 585 Bandwidth Improvement for Compact Microstrip Patch Antenna Using Metamaterials. **2016**, 129, 538-540 2
- 584 Analysis of Magnetic Permeability Spectra of Metamaterials Composed of Cut Wire Pairs by Circuit Theory. **2016**, 21, 187-191
- 583 Chapter 1 Introduction. **2016**, 1-74

582 Hybrid Resonance in the Split-Ring Resonator/Ferrite Structure in the C-Band. **2016**, 61, 727-731

581 Frequency Stop Band in an Air-Voided ZnO Photonic Crystal: A Dispersion Diagram Based Design. **2016**, 130, 683-687

580 Índice de refração, esse desconhecido (parte I). **2016**, 4,

579 Chapter 8: Broadband Optical Metasurfaces and Metamaterials. **2016**, 321-370

578 Patch Antenna Miniaturization Using CSRR. **2017**, 05, 132-150

o

577 Interaction of Light with Solids. **2017**, 1-56

576 Inverse Doppler effect of acoustic metamaterial with negative mass density. **2017**, 66, 024301

575 Design of Optical and Radiative Properties of Surfaces. **2017**, 1-46

574 Ferroic Nanometamaterials and Composites. **2017**, 193-214

573 Physics in Metamaterials. **2017**, 137, 346-349

572 Research of the metamaterial on the Chinese map. **2017**,

571 Front Matter. i-xlii

570 Metamelike Based Sensor Design and Application for Fuel Sector. **2017**, 9, 86-91

569 Hyperlenses and Metalenses. **2017**, 191-220

568 Ultrathin Metalens and Three-Dimensional Optical Holography Using Metasurfaces. **2017**, 91-126

567 A π -shaped flexible multiband ultra-thin terahertz metamaterial with consistent curved transmission spectra. **2017**, 4, 066201

566 Novel concepts of negative-n optics in master-level educational courses. **2017**, 20, 235-239

565 Silicon metamaterials for infrared applications. **2017**, 347-372

564 Nanoscale Optical Sensors Based on Surface Plasmon Resonance. **2017**, 335-370

563 Inhomogeneous Metamaterials: Super Quasicrystals. **2017**, 169-190

562 Normal and anomalous dispersion of weakly nonlinear localized modes in a plate of a layered superconductor. **2017**, 22, 31-38

1

561 Preamble. **2018**, 1-3

560 Introduction to Optical Metamaterials: Motivation and Goals. **2018**, 1-21

559 All-Dielectric Polarization-Independent Metasurface Using Cross-Shaped Unit cell. **2018**,

558 Introduction. **2018**, 1-44

557 Novel materials and devices bring new opportunities for holographic display. **2018**, 67, 024213

556 Plasmonics and Metamaterials. **2018**, 45-75

555 Electrodynamic Study of a Novel Microstrip Ring Based on Finite Integral Technique Numerical Computational Code. **2018**, 699-707

554 Polarization-independent dielectric metasurface for mid-infrared applications. **2018**,

553 RF Collimator Design having Multi-Dielectric Structure using the Phase Field Design Method. **2018**, 31, 47-52

1

552 Dynamics of the optical field in the ring cavity with nonlinear metamaterial and time-delayed feedback. **2018**,

551 Metamalzeme tabanlı bantlı enerji hasad uygulaması-1-12

550 Bakışsız Metamalzeme Kaplı Mikro Bant Anten Yapıları-**2018**, 33, 1-254

549 Vortex beam generation using all dielectric metasurface. **2018**,

548 Zero Phase Delay Transmission in Parity-Time Photonic Crystal. **2018**,

547 Manipulating electromagnetic wave propagation with negative-zero-positive index magnetic metamaterials. **2018**,

- 546 Dielectric film sensing with TE mode of terahertz guided-mode resonance. **2018**, 26, 34547-34556 5
- 545 Dual-band coherent perfect absorption based on graphene patterned metasurface with tunable absorption frequency and absorptivity. **2019**,
- 544 Efficient Optical Modulation of Terahertz Metamaterials Utilizing Organic/Inorganic Semiconductor Hybrid Systems. **2019**, 117-127
- 543 Microsphere-Assisted Interference Microscopy. **2019**, 443-469 3
- 542 A terahertz metamaterial analog of electromagnetically induced transparency and its application in loss detection. **2019**,
- 541 General Introduction. **2019**, 3-16
- 540 Analysis and Application of Negative Refraction of YVO4 Crystal. **2019**, 09, 504-510
- 539 What Is the Universe Made of? (Matter, Energy, and Interactions). **2019**, 57-107 1
- 538 Modern Insights into Macroscopic Electromagnetic Fields. **2019**, 1-4 0
- 537 Negative Refraction, Acoustical Metamaterials and Acoustical Cloaking. **2019**, 95-124
- 536 Catenary Plasmons for Flat Lensing, Beam Deflecting, and Shaping. **2019**, 173-228
- 535 Preface to Special Issue on Functional Artificial Structures for Controlling Optical Properties. **2019**, 47, 344
- 534 Three-dimensional metacrystals with a broadband isotropic diamagnetic response and an all-angle negative index of refraction. **2019**, 44, 927-930 0
- 533 Fabrication and optical characterization of hyperbolic nanoparticles on a transparent substrate. **2019**,
- 532 Metamaterials: opportunities in medical imaging. **2019**,
- 531 SRR Metamaterial Lens Design. 759-770
- 530 Generalized Veselago-Pendry lenses via complex transformation optics. **2019**, 27, 25670-25677 1
- 529 Biosensor platforms of the polarization-dependent metamaterials for the detection of cancer-cell concentration. **2019**,

- 528 Using the package of micromagnetic simulation mumax3 to determine the frequency dispersion of the magnetic nanostructures high-frequency magnetic susceptibility - elements of the microwave metamaterials. **2019**, 24, 3-10
- 527 Electromagnetic Scattering From Two Crossed Ferromagnetic Microwires. **2020**, 495-502
- 526 Analysis and design of new chiral metamaterials with asymmetric transmission characteristics. **2020**, 69, 214101
- 525 Materials for Electromagnetic Purpose: The Case of a Microstrip Patch Antenna Characteristics Improvement by Additions of Metals as Spherical Inclusions Into the Substrate. **2020**, 17, 11-16
- 524 Metamaterial-plasma based hyperbolic material for sensor, detector and switching application at microwave region. **2020**, 32, 325701 3
- 523 Determination of effective parameters of fishnet metamaterials with vortex based interferometry. **2020**, 28, 20051-20061 4
- 522 Waveguide gratings with metamaterial films. **2020**, 37, 2353
- 521 . **2020**, 68, 3547-3557 2
- 520 Extraordinary spin-orbit interaction in the plasmonic lens with negative index material. **2020**, 28, 26543-26554 1
- 519 Diffraction of TE Polarised Electromagnetic Waves by a Nonlinear Metamaterial Waveguide. **2020**,
- 518 Limits and possibilities of refractive index in atomic systems. **2021**, 127583 0
- 517 Sound insulation of a novel laminated polymer matrix composite containing metallic hollow spheres based on phononic crystal structure design. **2022**, 33, 601
- 516 Metasurface Photoelectrodes for Enhanced Solar Fuel Generation. **2021**, 11, 2102877 4
- 515 A new tunable elastic metamaterial structure for manipulating band gaps/wave propagation. **2021**, 42, 1543-1554 0
- 514 A broadband reconfigurable linear-to-circular polarizer/reflector based on PIN diodes. **2021**, 96, 125846 0
- 513 3D Metamaterial Multilayer Structures. **2020**, 81-98
- 512 Large-area, low-cost near-infrared meta-surface reflector based on a pixelated two-dimensional silicon disk array. **2020**, 28, 38355-38365 2
- 511 A Localized Collocation Solver Based on T-Complete Functions for Anti-Plane Transverse Elastic Wave Propagation Analysis in 2D Phononic Crystals. **2021**, 26, 2

- 510 Negative index materials: at the frontier of macroscopic electromagnetism. **2020**, 21, 343-366 1
- 509 Tunable terahertz metasurface resonator based on phase transition of VO₂ crosses. **2020**,
- 508 All-dielectric bulk isotropic double-negative metamaterials. **2021**, 38, 159 1
- 507 Toward Optimal Design of Rainbow Metamaterials. **2021**, 1085-1092
- 506 A Compact Component for Multi-Band Rejection and Frequency Coding in the Plasmonic Circuit at Microwave Frequencies. **2021**, 10, 4 2
- 505 Metamaterial based Flexible Coplanar Antenna Design and Simulation for Human Body Applications. 2541-2550 1
- 504 Design and Analysis of a Five-Band Polarization-Insensitive Metamaterial Absorber. **2020**, 2020, 1-12 2
- 503 Functional Metamaterial Devices Enabled by Microsystems. **2020**,
- 502 Shielding Effect Analysis on Layered Chiral and Dielectric Spheres. **2020**,
- 501 Design of a wideband random phase gradient metasurface by using line-shaped element. **2020**, 10, 2050030 0
- 500 A Miniaturized Electromagnetic Invisibility Cloaking Scheme. **2020**,
- 499 A Stereo Metamaterial and Metasurface Integrated Broadband Microwave Absorber. **2020**, 0
- 498 Metasurfaces for Transforming Microwave Antenna Performance. **2021**, 1-44
- 497 Fundamentals of Thermal Radiation. **2020**, 407-496
- 496 Introduction. **2020**, 1-14
- 495 Terahertz Fano resonances induced by combining metamaterial modes of the same symmetry. **2020**, 28, 3932-3941 0
- 494 Research progress of electromagnetic metamaterial absorbers. **2020**, 69, 134101 6
- 493 Cherenkov radiation based on metamaterials. **2020**, 69, 154103

- 492 Versatile architecture of ultra-narrow band absorbing photonic nanostructure. **2020**, 238, 05005 1
- 491 Interaction of Light with Solids. **2020**, 1-58
- 490 Polarization-Diverse Metasurfaces for High-Dimensional Spatial-Mode Entanglement Generation. **2020**, 0
- 489 Plasmonic band structures and its applications. **2020**, 69, 157301 2
- 488 Research progress of information metamaterials. **2020**, 69, 158101 4
- 487 Surface Plasmons and Plasmonics. **2020**, 531-556
- 486 Research progress of analogical gravitation on optical metamaterial chips. **2020**, 69, 157802
- 485 Analogues of gravity-induced instabilities in anisotropic metamaterials. **2020**, 2, 0
- 484 All-dielectric bifunctional polarization converter with high transmission efficiency in near-infrared region. **2020**, 59, 3825-3832 0
- 483 . **2020**, 221-260
- 482 High-temperature broadband reflection reduction: Design, fabrication, and characterization. 0
- 481 Hierarchical geometric designs for Fe-based amorphous materials with tunable soft magnetic properties. **2021**, 162628 0
- 480 Metallic Ferromagnet of $\text{La}_{0.5}\text{Sr}_{0.5}\text{MnO}_3$ with Negative Permittivity and Permeability. 2101020 0
- 479 Comparative analysis of metasurface array-based solar absorber for visible region. **2021**, 53, 1 15
- 478 Photonic metamaterial planar optical waveguide structures with all Kerr-type nonlinear guiding films. **2021**, 53, 1
- 477 A metamaterial-based compact multiple-input multiple-output antenna with pattern diversity. e22964
- 476 High Q-factor frequency selective surfaces based on coplanar waveguide transmission line. **2020**,
- 475 Near Field Authentication. 74-99

474 Nanolithography in the Evanescent Near Field. **2006**, 397-424

473 Equivalent Circuit (EC) FDTD Method for Dispersive Materials: Derivation, Stability Criteria and Application Examples. **2008**, 211-238

2

472 Continuously tunable metasurfaces controlled by single electrode uniform bias-voltage based on nonuniform periodic rectangular graphene arrays. **2020**, 28, 29306-29317

4

471 Influence of micro-structure on modulation properties in VO composite terahertz memory metamaterials. **2020**, 28, 31436-31445

1

470 Triple-Band Polarization-Insensitive Wide Angle Ultrathin Hexagonal Circumscribed Metamaterial Absorber. **2021**, 659-666

469 Composite right/left-handed transmission line with array of thermocouples for generating terahertz radiation. **2020**, 92, 20502

1

468 Structural parameters of hyperbolic metamaterials controlling high-k mode resonant wavelengths. **2020**, 37, 3784

4

467 Analytic Sinusoidal Steady-State Electromagnetic Field Expressions for the Ideal Veselago Lens. **2021**, 2, 1057-1070

1

466 Metamaterials and Anisotropic Media Realization for mmWave Applications. **2021**, 15-29

465 Progress of low-frequency sound absorption research utilizing intelligent materials and acoustic metamaterials.. **2021**, 11, 37784-37800

6

464 Self-assembled vertically aligned nanocomposite systems integrated on silicon substrate: Progress and future perspectives. **2022**, 40, 010802

2

463 From functional units to material design: A review on recent advancement of programmable microwire metamaterials. **2022**, 153, 106734

2

462 A Four-beam Antenna Based on Square Patch Metasurface1. **2021**,

461 Femtosecond laser fabrication of metallic nanostructures using polarization control. **2021**,

460 Simultaneous enhancement of radial resolution and side lobe suppression of tubular hyperlens via introducing a nano-gap layer. **2021**,

459 Broadband negative-index surface-waves on arrays of capped helices. **2021**, 3,

458 The chemistry and applications of flexible porous coordination polymers. **2021**, 3, 100067

11

457 Temperature oscillation in one-dimensional superlattice induced by phonon localization.

0

- 456 Magnetic excitation of high-Q resonance with split-ring resonators. **2021**, 3, 045034
- 455 A Review of Topological Semimetal Phases in Photonic Artificial Microstructures. **2021**, 9, 2
- 454 Dual-band metamaterial absorber with stable absorption performance based on fractal structure. **2022**, 55, 095003 1
- 453 Three-dimensional Direct Current Invisibility Cloak Produced with Bulk Materials.
- 452 Metamaterial Survivability in the High-Power Microwave Environment. **2021**, 233-244 1
- 451 On-demand terahertz surface wave generation with MEMS-based metasurface. 4
- 450 Recent progress in acoustic metamaterials and active piezoelectric acoustic metamaterials - A review. **2021**, 26, 101260 4
- 449 Introduction and Overview of the Book. **2021**, 1-16
- 448 Optimal design of microwave absorber using novel variational autoencoder from a latent space search strategy. **2021**, 212, 110266 4
- 447 Introduction. **2021**, 1-11
- 446 Symmetric plasmonic nanoparticle clusters: Synthesis and novel optical properties. **2021**, 0
- 445 THz Meta-Atoms Versus Lattice to Non-invasively Sense MDAMB 231 Cells in Near Field. **2021**, 363-376
- 444 Acoustic focusing and imaging via phononic crystal and acoustic metamaterials. **2022**, 131, 011103 9
- 443 Independent Wavefront Tailoring in Full Polarization Channels by Helicity-Decoupled Metasurface. 2100546 1
- 442 Reflective and transmissive cross-polarization converter for terahertz wave in a switchable metamaterial. **2022**, 97, 015501 2
- 441 Design and analysis of a polarization-independent and incident angle insensitive triple-band metamaterial absorber. **2022**, 138, 115131 2
- 440 A Planar Bessel lens with non-Diffraction Beam Deflection based on Metasurfaces. **2020**,
- 439 Atomic Segregation In Co-deposited Si-Al Coatings. **2020**, 0

- 438 A Three-Dimensional Metamaterial Resonator in Low Terahertz Frequency.
- 437 The Design of the Conformal Electromagnetic Stealth Meta-surface for Arbitrary NURBS Curved Surfaces. **2020**,
- 436 Metamaterials and Negative Refraction. **2020**, 2
- 435 Polarization of THz Signals Using Graphene-Based Metamaterial Structure. **2021**, 221-237 1
- 434 Rapid Analysis of Daminozide Solutions by Double Formant Metamaterial-Based Terahertz Time-Domain Spectroscopy.
- 433 Liquid Reconfigurable Metamaterial Absorber. **2021**,
- 432 Coarsely Discretized Huygens' Metasurface: Manipulating EM Waves with Simplicity. **2021**, 0
- 431 Ultrathin Polarization Insensitive Terahertz Metamaterial Absorber. **2021**,
- 430 Radio-Frequency-Based Resonating Sensor for Condition Monitoring on Rotary Equipment. **2021**, 0
- 429 Negative refractive index in a Doppler broadened three-level E-type atomic medium. **2022**, 97, 025503 0
- 428 Dynamic inversion of planar-chiral response of terahertz metasurface based on critical transition of checkerboard structures. **2021**, 1
- 427 A generalized Bayesian regularization network approach on characterization of geometric defects in lattice structures for topology optimization in preliminary design of 3D printing. 1 0
- 426 Numerical analysis of wave propagating in a periodic layered structure.
- 425 Super-resolution imaging of negative-refractive graded-index photonic crystal flat lens. **2022**, 9, 016201
- 424 Optical Propagation in Anisotropic Materials. **2022**, 175-202
- 423 Hyperbolic metamaterials: fusing artificial structures to natural 2D materials. **2022**, 2, 48
- 422 Design of High-performance Terahertz Sensor Based on Metamaterials. **2022**, 2174, 012001 0
- 421 Mimicking gravitational lens on a thin elastic plate. **2022**, 120, 031106 0

420	Design and analysis of a five-band metamaterial absorber. 1-12	0
419	Analysis of Asymmetry in Active Split-Ring Resonators to Design Circulating-Current Eigenmode: Demonstration of Beamsteering and Focal-Length Control toward Reconfigurable Intelligent Surface.. 2022 , 22,	
418	Recent advances in the stereolithographic three-dimensional printing of ceramic cores: Challenges and prospects. 2022 ,	1
417	Structural design of compressible shape-memory foams for smart self-fixable electromagnetic shielding with reduced reflection. 2022 , 22, 100612	5
416	Polarization insensitive symmetrical structured double negative (DNG) metamaterial absorber for Ku-band sensing applications.. 2022 , 12, 479	6
415	Compact reversed Cherenkov radiation oscillator with high efficiency. 2022 , 120, 053501	3
414	Effect of particle shape on electrical conductivity and negative permittivity spectra of Cu granular composite materials. 2022 , 33, 4974	0
413	Double-E-Triple-H-Shaped NRI-Metamaterial for Dual-Band Microwave Sensing Applications. 2022 , 71, 5817-5836	1
412	Nonlinearly tunable extraordinary optical transmission in a hybrid metamaterial.	
411	Chiral magnetic effect in Weyl semimetals and negative refraction. 2022 , 95, 1	
410	Reconfigurable terahertz metamaterials: From fundamental principles to advanced 6G applications.. 2022 , 25, 103799	4
409	Dual-band multifunctional coding metasurface with a mingled anisotropic aperture for polarized manipulation in full space. 2022 , 10, 416	1
408	Terahertz Metamaterial Absorber Sensor Based on Double-opening Metal Ring. 2022 ,	
407	Optically Left-Handed Nanoparticle Beads with Inductance-Capacitance Circuits at Visible-Near-Infrared Frequencies Based on Scalable Methods.. 2022 , 14, 7121-7129	0
406	Numerical methods for design of metamaterial photonic crystals and random metamaterials. 2022 , 9, 1	
405	Acoustic metamaterial and metasurface composed of meta-atoms and meta-molecules.	0
404	Homogenization of the wave equation with non-uniformly oscillating coefficients. 108128652110650	0
403	Suppression of Cross-Band Coupling Interference in Tri-Band Shared-Aperture Base Station Antenna. 2022 , 1-1	3

- 402 Impedance theory of wave propagation on infinite periodic structures. **2022**, 525, 116801 0
- 401 Tailoring Standing Waves on Meta-atom: A Facile Way to High-Efficiency Functional Metasurface with Spin-Selectivity. 0
- 400 Cloaking or Invisibility is the Foundation of Highly Intelligent Bio-machinery: Why Are Computer Circuits Primitive?. **2022**, 35-75
- 399 Functional Chirality: From Small Molecules to Supramolecular Assemblies. **2022**, 14, 292 4
- 398 Ultranarrow dual-band metamaterial perfect absorber and its sensing application. **2022**, 24, 035103 1
- 397 Multifunctional metasurface based bandstop and bandpass filters for terahertz radiation. **2022**, 253, 168551
- 396 Nickel/yttrium iron garnet metacomposites with adjustable negative permittivity behavior toward electromagnetic shielding application. **2022**, 155, 106842 1
- 395 Thermally switchable and tunable metasurface with polarization independence based on VO₂ phase transition. **2022**, 139, 115121 1
- 394 Physical and materials aspects of photonic crystals for microwaves and millimetre waves. **2022**, 95, 618-623
- 393 Analysis of graphene-based tunable THz four-band absorption sensors.. **2022**, 61, 2103-2107 1
- 392 Optical nanocavities.
- 391 Quasi-omnidirectional retroreflective metagrating for TE-polarized waves based on wave-vector reversions.. **2022**, 30, 7110-7123
- 390 Toroidal dipole resonances by a sub-wavelength all-dielectric torus.. **2022**, 30, 7491-7500 1
- 389 Exponentially generalized vortex.
- 388 Broadband terahertz metamaterial absorber and modulator based on hybrid graphene-gold pattern. **2022**, 140, 115142 1
- 387 Physical optics approximation of electromagnetic field scattered from large PEC objects covered with chiral metamaterials. **2022**, 147, 154142
- 386 Tunable Phase Distribution of Liquid Metamaterial. **2022**, 3, 2100239 1
- 385 Imaging with metamaterials. **2022**, 4, 85-100 10

384	Printed Periodic Structures in Support to 5G Network Antennas. 2022 , 73-108	0
383	MRI metamaterials.	
382	Mechanically tunable PDMS-based polyHIPE acoustic materials.	0
381	Ferromagnetic Microwire Metacomposites. 2022 ,	
380	Encoding and Tuning of THz Metasurface-Based Refractive Index Sensor With Behavior Prediction Using XGBoost Regressor. 2022 , 10, 24797-24814	9
379	Terahertz 3D bulk metamaterials with randomly dispersed split-ring resonators. 2022 ,	2
378	High efficiency ambient RF energy harvesting by a metamaterial perfect absorber. 2022 , 12, 1242	2
377	Switchable ultra-broadband terahertz wave absorption with VO-based metasurface.. 2022 , 12, 2501	3
376	A transfer matrix method for calculating the transmission and reflection coefficient of labyrinthine metamaterials.. 2022 , 151, 1022	
375	Topological Engineering of the Iso-Frequency Contours in Connection-Type Metamaterials. 2022 , 10,	
374	Wide-Oblique-Incident-Angle Stable Polarization-Insensitive Ultra-Wideband Metamaterial Perfect Absorber for Visible Optical Wavelength Applications.. 2022 , 15,	2
373	Designing plasmonic metasurface absorbers with desirable absorption values for different thermal applications. 2022 , 97, 055504	
372	Transmission Spectra in One-dimensional Defective Photonic Crystal Integrating Metamaterial and Superconductor. 1	0
371	Optical Properties and Dynamic Extrinsic Chirality of Structured Monolayer Black Phosphorus. 2022 , 9,	1
370	Magnetic plasmon induced ultra-narrow perfect light absorption at visible frequency for gas sensing. 2022 , 15, 042002	1
369	Recent Advances in Planar Optics-Based Glasses-Free 3D Displays. 2022 , 4,	2
368	Broadband Polarization Manipulation Based on W-Shaped Metasurface. 2022 , 9,	0
367	Deep learning modeling strategy for material science: from natural materials to metamaterials. 2022 , 5, 014003	

- 366 Observation of optical gyromagnetic properties in a magneto-plasmonic metamaterial.. **2022**, 13, 1719 5
- 365 Research on full-polarization electromagnetic holographic imaging based on quasi-symmetrical structure reconfigurable metasurfaces.. **2022**, 30, 10743-10757 0
- 364 Ultrafast metamaterial all-optical switching based on coherent modulation.. **2022**, 30, 9284-9297 0
- 363 An ultra-thin flexible conformal four-band metamaterial absorber applied in S-/C-/X-band. **2022**, 97, 045813 0
- 362 Broadband Generation of Polarization-Immune Cloaking via a Hybrid Phase-Change Metasurface. **2022**, 9, 156 1
- 361 Thin film block copolymer self-assembly for nanophotonics.. **2022**, 1
- 360 Amplitude-phase modulation metasurface hologram with inverse angular spectrum diffraction theory. **2022**, 55, 235102 2
- 359 Near-field multiple super-resolution imaging from Mikaelian lens to generalized Maxwell's fish-eye lens. 4
- 358 Double-layered transformation cavities: Crossover between local and global transformations. **2022**, 105, 4
- 357 Omnidirectional nonreciprocal absorber realized by the magneto-optical hypercrystal.. **2022**, 30, 12104-12119 4
- 356 Research on lightning impulse voltage discharge characteristics of electromagnetic metamaterials. **2022**, 116, 103696 0
- 355 Resonant absorption of electromagnetic waves by an induced inhomogeneity in a liquid metamaterial. **2022**, 39, 1307 0
- 354 Incoherent control of Goos-Hänchen shifts in a tunneling quantum dot molecule. **2022**, 19, 055207 0
- 353 Optical bistability in a negative refractive index media using the electron tunneling effect. **2022**, 19, 055210 0
- 352 Tuning of strong nonlinearity in radio-frequency superconducting-quantum-interference-device meta-atoms.. **2022**, 105, 044202 0
- 351 Ferroelectric composite artificially-structured functional material: multifield control for tunable functional devices. **2022**, 55, 303002 0
- 350 Haferman carpet fractal shaped metasurface enabled with graphene as a THz absorber. **2022**, 128276 0
- 349 A New Compact Split Ring Resonator Based Double Inverse Epsilon Shaped Metamaterial for Triple Band Satellite and Radar Communication. **2022**, 12, 520 1

- 348 Electromagnetically induced transparency metamaterials: theories, designs and applications. **2022**, 55, 263003 1
- 347 Modified fishnet structure with a wide negative refractive index band and a high figure of merit at microwave frequencies. **2022**, 39, 1282 0
- 346 Hybrid resonant cavities: A route towards phase engineered THz metasurfaces.. **2022**, 25, 104024 0
- 345 Broadband transmissive amplitude-and-phase metasurface for vortex beam generation and hologram. **2022**, 434, 128036
- 344 Fabry-Pérot cavity resonance based metamaterial absorber for refractive index sensor at infrared frequencies. **2022**, 514, 128142 2
- 343 Ultra-sensitive narrow-band plasmonic perfect absorber for sensing applications. **2022**, 50, 101018 0
- 342 Enhancement in Gain of a compact UWB Vivaldi antenna by using zero index metamaterial array. **2021**,
- 341 Experimental Demonstrations of ELC-type Microwave Optomechanical Metamaterial. **2021**,
- 340 Design of All-Dielectric Long-wave infrared Wide-angle Metalens.
- 339 Angularly Stable Metasurface Design for Polarization Conversion Applications at C-band. **2021**,
- 338 Magnetic modulation of Fano resonances in optically thin terahertz superlattice metasurfaces. **2022**, 55, 135109 0
- 337 Effects of CPT -odd terms of dimensions three and five on electromagnetic propagation in continuous matter. **2021**, 104, 0
- 336 An Extended k-Surface Framework for Electromagnetic Fields in Artificial Media.. **2021**, 14, 1
- 335 Vector-Field Visualization of the Total Reflection of the EM Wave by an SRR Structure at the Magnetic Resonance. **2022**, 15, 111 0
- 334 Overview on metamaterial: History, types and applications. **2021**, 2
- 333 Hybridization of dark resonant states in terahertz metasurfaces. **2021**, 130, 243101 3
- 332 Tunable polarization comb based on the electromagnetically induced transparency with hybrid metal-graphene metamaterial. **2021**, 96, 125539 0
- 331 Implementation of Resonant Electric Based Metamaterials for Electromagnetic Wave Manipulation at Microwave Frequencies.. **2021**, 21, 0

- 330 Demonstration of negative refraction induced by synthetic gauge fields. **2021**, 7, eabj2062 2
- 329 High-Efficiency Full-Space Complex-Amplitude Metasurfaces Enabled by a Bi-Spectral Single-Substrate-Layer Meta-Atom. **2022**, 10, 2102084 4
- 328 Dimensional Optimization of TiO₂ Nanodisk Photonic Crystals on Lead Iodide (MAPbI₃) Perovskite Solar Cells by Using FDTD Simulations. **2022**, 12, 351 3
- 327 Effective Medium Theory of Metamaterials and Metasurfaces. **2022**, 0
- 326 Four-Dimensional Printed Shape Memory Metasurface to Memorize Absorption and Reflection Functions. **2021**, 2
- 325 Wideband RCS reduction using plasma based checkerboard metasurface. 0
- 324 Cloaking Property of a Plasmonic Structure in Doubly Complementary Media and Three-Sphere Inequalities with Partial Data. **2022**, 54, 2040-2096
- 323 Hydrodynamic Manipulation Cloak for Redirecting Fluid Flow. 0
- 322 Phase-shift analysis of locally resonant piezoelectric metasurface. **2022**,
- 321 Tunable broadband terahertz metamaterial absorber based on vanadium dioxide. **2022**, 12, 045219 1
- 320 Novel materials in magnetic resonance imaging: high permittivity ceramics, metamaterials, metasurfaces and artificial dielectrics.. **2022**, 1 1
- 319 Tunable structured light with flat optics.. *Science*, **2022**, 376, eabi6860 33:3 21
- 318 Editorial on special issue: Metamaterials and plasmonics in Asia **2022**, 11, 1655-1658
- 317 Anomalous resonance frequency shift in liquid crystal-loaded THz metamaterials. **2022**, 11, 2341-2348
- 316 Analytical and Numerical Analyses of Multilayer Photonic Metamaterial Slab Optical Waveguide Structures with Kerr-Type Nonlinear Cladding and Substrate. **2022**, 12, 628
- 315 Dielectric-Meta material Reflectors for Effective Absorption of Light in Solar Cells.
- 314 Metamaterial sensor based on rectangular enclosed adjacent triple circle split ring resonator with good quality factor for microwave sensing application.. **2022**, 12, 6792 2
- 313 Design of three-dimensional isotropic negative-refractive-index metamaterials with wideband response based on an effective-medium approach. **2022**, 128, 1

312	Polarization-selective absorption and transmission metamaterials.	2
311	A Review on Metamaterial Absorbers: Microwave to Optical. 2022 , 10,	1
310	Negative radiation pressure in metamaterials explained by light-driven atomic mass density rarefaction waves.. 2022 , 12, 6753	0
309	Three-dimensional printed and fluidic dielectric material optically transparent metasurface for switchable absorption and reflection functionality in microwave frequency region. 1-15	0
308	Intelligent metasurfaces: control, communication and computing. 2022 , 2,	22
307	Ultralow loss visible light metamaterials assembled by metaclusters. 2022 ,	1
306	Recent advances in radio-frequency negative dielectric metamaterials by designing heterogeneous composites. 1	6
305	Greedy-algorithm-empowered design of wideband achromatic beam deflector based on spoof surface plasmon polariton mode. 2022 , 137, 1	
304	High efficiency of broadband transmissive metasurface terahertz polarization converter.	
303	Interfacial wave between acoustic media with Willis coupling. 2022 , 102922	0
302	Chiral metasurface design with highly efficient and controllable asymmetric transmission and perfect polarization conversion of linearly polarized electromagnetic waves in the THz range. 2022 , 55, 295303	1
301	The circularly bent split ring resonator with a high effective medium ratio for multi frequency satellite band applications. 2022 , 169464	0
300	Terahertz mode switching of spin reflection and vortex beams based on graphene metasurfaces. 2022 , 153, 108278	1
299	Compact Patch Antenna Parameters Integrating Using Left-Handed Meta Material at 2.41GHz. 2014 , 2, 21-24	1
298	Metamaterial CSRR Loaded T-Junction Phase Shifting Power Divider Operating at 2.4 GHz. 2022 , 339-345	
297	Dual square split ring enclosed spiral shaped hybrid metamaterial resonator with size miniaturisation for microwave wireless applications.. 2022 , 12, 8028	0
296	Water Wave Polaritons. 2022 , 128,	1
295	Goos-Hanchen Shift in the presence of dispersive dielectric-magnetic medium using Lorentz-Drude Model. 2022 , 169273	0

- 294 Enhanced Light Absorptivity by Designing 2D Photonic Crystals on Lead Iodide based Perovskite Solar Cell. **2021**,
- 293 Metantennas: Opportunities and Challenges in Future Microwave Metasurface Antenna Research and Applications. **2022**,
- 292 Analysis of Conformal and Metamaterial Based Microstrip Bandpass Filter for Wi-MAX, WBAN and ISM Band Applications. **2022**, 67, 443-455
- 291 Broadband linear polarizer with high-efficient asymmetric transmission using a chiral metasurface. **2022**, 154244 O
- 290 Microwave Liquid Crystal Technology. **2022**, 265-414
- 289 Perovskite-based multi-dimension THz modulation of EIT-like metamaterials. **2022**, 262, 169348 2
- 288 Selective mode excitations and spontaneous emission engineering in quantum emitter-photonic structure coupled systems. **2022**, 30, 21103
- 287 Ultra-wideband low-scattering metamaterial based on combination of water absorber and polarization rotation metasurface. 2
- 286 Metasurface-Enhanced Infrared Spectroscopy: An Abundance of Materials and Functionalities. 2110163 O
- 285 Engineering a U(1) lattice gauge theory in classical electric circuits. **2022**, 105, 1
- 284 Relaxed Phase-Matching Constraints in Zero-Index Waveguides. **2022**, 128, 1
- 283 A novel plasmonic waveguide for the dual-band transmission of spoof surface plasmon polaritons. **2022**, 137, O
- 282 Introduction and Motivation. **2022**, 1-42
- 281 Multitasking device with switchable and tailored functions of ultra-broadband absorption and polarization conversion. O
- 280 Polarization insensitive split square ring resonator based epsilon-negative and near zero refractive index metamaterial for S, C, and X frequency bands satellite and radar communications. **2022**, 12, O
- 279 Rotation controlled topological edge states in a trimer chain composed of meta-atoms. **2022**, 24, 063001 1
- 278 Asymmetrical photonic spin Hall effect based on dielectric metasurfaces.
- 277 Metamaterial sensor based on reflected mirror rectangular split ring resonator for the application of microwave sensing. **2022**, 198, 111416 O

276	State switching of terahertz reflection and orbital angular momentum in phase change metasurfaces. 2022 , 1-6	2
275	Overview of Approaches for Compensating Inherent Metamaterials Losses. 2022 , 1-1	
274	Methodological Principles for Determining Electrophysical Parameters of Materials and Coatings with a Complex Internal Structure Using Surface Electromagnetic Waves. 2022 , 58, 205-220	
273	A Miniaturized Half-Coplanar Waveguide CRLH Leaky Wave Antenna for Millimeter-Wave Applications. 2022 ,	
272	A Theory of Signal Conversion in the Radio Optics of Metamaterials. 2022 , 86, 579-583	
271	High-Resolution Programmable Metasurface Imager Based on Multilayer Perceptron Network. 2200619	3
270	Quad-band Polarization Sensitive Terahertz Metamaterial Absorber Using Gemini-Shaped Structure. 2022 , 100254	0
269	The Heterogeneous Multiscale Method for Dispersive Maxwell Systems. 2022 , 20, 769-797	
268	Nonlinear waves propagating in a hollow metamaterial waveguide. 2022 , 12, 065014	
267	Photonic Bandgaps of One-Dimensional Photonic Crystals Containing Anisotropic Chiral Metamaterials. 2022 , 9, 411	0
266	Tunable Multi-band Switch with Uncoupled Graphene-based Metamaterial Patches.	
265	Ultra-wideband efficient polarization conversion of terahertz wave in a planar metamaterial. 2022 , 55, 355108	1
264	Derivation of expression of time-averaged stored energy density of electromagnetic waves. 2022 , 128,	0
263	Polarization insensitive, wide angle and wideband anisotropic metamaterial absorber comprising phase change Ge ₂ Sb ₂ Te ₅ (GST)/SiO ₂ layered media. 1-12	1
262	Analysis and design of double negative metamaterial offering seven operating bands with minimum frequency ratio. 1-17	
261	Terahertz graphene metasurfaces for cross-polarized deflection, focusing, and orbital angular momentum.	2
260	Terahertz Metamaterial Sensor for Sensitive Detection of Citrate Salt Solutions. 2022 , 12, 408	5
259	Field manipulation of electromagnetically induced transparency analogue in terahertz metamaterials for enhancing liquid sensing. 2022 , 157, 107127	0

- 258 Design of a biosensor for the detection of glucose concentration in urine using 2D photonic crystals. **2022**, 297-307
- 257 Highly Sensitive Terahertz Sensor Based on Graphene Metamaterial Absorber.
- 256 Interaction of Light with Solids. **2022**, 1-59
- 255 Equivalent Circuit Model Analysis of Electromagnetic Metasurface Loaded With Plasma. **2022**, 1-8
- 254 A Broadband Metamaterial Absorber for Cloaking Applications. **2022**, ○
- 253 Design and Characterization of Wideband Terahertz Metamaterial Stop-Band Filter. **2022**, 13, 1034
- 252 Classification of Intensity Distributions of Transmission Eigenchannels of Disordered Nanophotonic Structures Using Machine Learning. **2022**, 12, 6642
- 251 Negative Reflection and Negative Refraction in Biaxial van der Waals Materials. **2022**, 22, 5607-5614 2
- 250 Asynchronous Space-Time-Coding Digital Metasurface. 2200106 ○
- 249 Acoustic Negative Refraction and Planar Focusing Based on Purely Imaginary Metamaterials. **2022**, 12, 5962 ○
- 248 Broadband and Efficiency Reflective Polarization Converter in X and Ku Bands Based on an Asymmetric Rod-Shaped Ring with a Hole-Shaped Metasurface.
- 247 A Review on Graphene-Based Electromagnetic Functional Materials: Electromagnetic Wave Shielding and Absorption. 2204591 4
- 246 Realization of broadband polarization-insensitive negative refraction using water-based metamaterial. ○
- 245 Ultrawide meta-film replication process for mass production of flexible microwave absorbing meta-surface.
- 244 Metamaterials: From fundamental physics to intelligent design. ○
- 243 Resonant absorption in an inhomogeneous disordered metamaterial: First-principles simulation. **2022**, 106,
- 242 Steer by Image Technology for Intelligent Reflecting Surface Based on Reconfigurable Metasurface with Photodiodes as Tunable Elements. **2022**, 12, 951
- 241 Splitting of waves in rotor-in-rotor nonlocal metamaterials by internal rotor coupling. **2022**, 221, 110921 ○

- 240 Negative refraction and quantum vacuum effects in gyroelectric chiral medium and anisotropic magnetoelectric material. **2006**, 518, 894-910
- 239 Local field contribution to the optical properties of multilevel coherent atomic media. **2007**, 519, 364-378
- 238 Backwards on Minkowski's road. From 4D to 3D Maxwellian electromagnetism. **2008**, 520, 769-786 5
- 237 Optimization design of the acoustic metamaterial based on the co-simulation method. **2022**, 12, 075317
- 236 MEMS-based metamaterial grating waveguide for tunable optical attenuator and modulator applications. **2022**, 156, 108488 0
- 235 Novel properties of wave propagation in biaxially anisotropic left-handed materials. **2004**, 516, 335-356
- 234 Numerical Investigation of a Gear-shaped Triple Band Perfect Terahertz Metamaterial Absorber as Biochemical Sensor. **2022**, 1-1 1
- 233 Analysis and Design of Metamaterial Antenna using the Theory of Characteristic Modes. **2022**,
- 232 Design of an ultra-thin hepta-band metamaterial absorber for sensing applications. **2022**, 54, 1
- 231 Study of High Coupling Efficiency Cone Micro-Lensed Fiber Applied in Silicon Photonics Chip Packaging. **2022**,
- 230 Novel self-assembled two-dimensional layered oxide structure incorporated with Au nano-inclusions towards multifunctionalities. 0
- 229 An Improved Smart Meta-Superconductor MgB₂. **2022**, 12, 2590 0
- 228 Study on Miniaturization of Antenna Using Metamaterials.
- 227 Simultaneous excitations of odd and even order resonances in plasmonic metasurfaces for an orthogonal terahertz probe. **2022**, 61, 7435
- 226 Broadband Ultra-Thin High-Efficiency Linear Polarizer Based on Metasurfaces. **2022**, 11, 2599
- 225 Perfect Solar Absorber with Extremely Low Infrared Emissivity. **2022**, 9, 574
- 224 High-Performance Ultra-Broadband Absorber for Polarized Long-Wavelength Infrared Light Trapping. **2022**, 12, 1194 0
- 223 Theoretical proposal of a novel multitasking metasurface switched by solid-state plasma and gravity field. 1-26 1

222	Terahertz Plasmonic Sensor Based on Metal/Insulator Composite Woven-Wire Mesh. 2022 , 12, 669	
221	Tunable transmission of a normal incidence through a double-slab structure. 1-13	
220	Robust and High-Efficient Fabrication of Gold Triangles Array on Optical Fiber Tip for Laser Mode Locking. 2200703	1
219	Active and tunable nanophotonic metamaterials. 2022 , 11, 3769-3803	2
218	Ultra-Broadband Mid-Infrared Metamaterial Absorber Based on Multi-Sized Resonators. 2022 , 15, 5411	1
217	A broadband metamaterial absorber with flexible low infrared radiation. 2022 , 55, 425102	
216	Design of Novel Energy Harvesting Device Based on Water Flow Manipulation.	
215	Tunable anisotropic parameters realized by metal-dielectric hybrid meta-atoms.	
214	Tunable Compact Metamaterial-Based Double-Negative/Near-Zero Index Resonator for 6G Terahertz Wireless Applications. 2022 , 15, 5608	1
213	Metamaterial split-ring resonators applied as reduced-size four-port antenna array for MIMO applications. 2022 , 154, 154338	0
212	Double negative circular shaped inductively coupled metamaterial power splitter for the C-, X band applications. 2022 , 267, 169702	0
211	Characteristics of an Airy beam at a dielectric interface. 2022 , 156, 108607	0
210	Recent Progress in Reconfigurable and Intelligent Metasurfaces: A Comprehensive Review of Tuning Mechanisms, Hardware Designs, and Applications. 2203747	3
209	All-angle reflectionless negative refraction with ideal photonic Weyl metamaterials. 2022 , 11,	1
208	Functional aerogel coatings on tetrakaidecahedron lattice. 2022 , 180, 111575	0
207	Metamaterial-FSS for the Design of High-Performance Radome. 2022 , 1-61	0
206	A Non-contact Feed Microwave Metal Devices Deformation and Stress Sensor Based on Metamaterial. 2022 , 1-10	0
205	Plug-and-play plasmonic metafibers for ultrafast fibre lasers. 2022 , 3, 1	1

204	A Terahertz-Based Graphene Metasurface Sensor for Hemoglobin Detection with High Q Factor and Low Figure of Merit. 2022 , 41-51	0
203	Graphene assisted tunable narrowband metamaterial absorber for infrared wavelength. 2022 ,	0
202	Modeling of a Negative Refractive Index Metamaterial Unit-Cell and Array for Aircraft Surveillance Applications. 2022 , 10, 99790-99812	1
201	Introduction. 2022 , 1-19	0
200	Study of Inductive Reactance of a Micro Strip Line Structure with The Width Metal Strip. 2022 , 629-634	0
199	A Novel Tri-Band Antenna Based on defective ground teminal and Polygon Resonant Ring of metamaterial. 2022 ,	0
198	Flexible metamaterial design based on wearable material for microwave energy harvesting. 2022 , 45,	0
197	Coding metasurface for diffusion-like scattering in multiple directions based on PancharatnamBerry phase.	0
196	Self-assembled pagoda-like nanostructure-induced vertically stacked split-ring resonators for polarization-sensitive dichroic responses. 2022 , 9,	2
195	Anomalous Electromagnetic Tunneling in Bianisotropic ?Zero Media. 2022 , 129,	0
194	A Review Analysis of Metamaterial-Based Absorbers and Their Applications.	0
193	Broadband continuous supersymmetric transformation: a new paradigm for transformation optics. 2022 , 2,	0
192	Thermally induced phase transforming cellular lattice driven by bimetal beams.	0
191	Co-planar waveguide ferromagnetic resonance spectroscopy of cobalt/platinum superlattice metamaterials.	0
190	Pulse-Driven Self-Reconfigurable Meta-Antennas.	0
189	Frequency-Variation Sensors. 2022 , 65-118	0
188	Multiple linear-crossing metamaterials for directional refraction. 9,	0
187	Modelling and Simulation of Acoustic Metamaterials for Architectural Application. 2023 , 223-236	0

- 186 Electromagnetic composites: From effective medium theories to metamaterials. **2022**, 132, 101101 1
- 185 Body-Centered Double-Square Split-Ring Enclosed Nested Meander-Line-Shaped Metamaterial-Loaded Microstrip-Based Resonator for Sensing Applications. **2022**, 15, 6186 0
- 184 Design and Optimization of the Quad-Band Negative Group Delay Circuit Based on Genetic Algorithm. **2022**, 0
- 183 Versatile optical beam routers based on inversely designed supercell metagratings. **2022**, 101075 0
- 182 Design of a 2-Bit wide-angle coding metasurface for bistatic RCS reduction. 9, 0
- 181 Large-Scale Functionalized Metasurface-Based SARS-CoV-2 Detection and Quantification. 2
- 180 Highly sensitive terahertz sensor based on graphene metamaterial absorber. **2022**, 129021 1
- 179 Analysis and Design of Microstrip Patch Antenna with Two Different Metamaterial Unit Cells. **2023**, 577-588 0
- 178 Enhanced Chiral Sensing at the Few-Molecule Level Using Negative Index Metamaterial Plasmonic Nanocuvettes. 0
- 177 Theory for Negative Thermal Transport: Complex Thermal Conductivity. **2023**, 263-275 0
- 176 Propagation of adjustable anomalous hollow Gaussian beams in the cascade of left-handed and right-handed media. **2022**, 270, 170024 0
- 175 A nonlinear seismic metamaterial lying on layered soils. **2022**, 272, 115032 0
- 174 Optimization of metamaterials and metamaterial-microcavity based on deep neural networks. 0
- 173 Metamaterial Lens for Nondestructive Evaluation of Composites. **2022**, 1-28 0
- 172 Switchable Terahertz Metasurfaces Based on Patterned Vanadium Dioxide and Graphene. **2022**, 17, 663-673 0
- 171 Applications of Nanoporous and Metamaterials: An Unornamented Review. **2022**, 20, 0
- 170 Simulating Optical Response of Disordered Photonic Crystals Using the Discrete Fourier Transform. **2022**, 0
- 169 Modern Advances in Magnetic Materials of Wireless Power Transfer Systems: A Review and New Perspectives. **2022**, 12, 3662 1

168	An Application-Based Study on Electromagnetic Absorber Using Metamaterial.	0
167	Gradient-index nanophotonics and metamaterials. 2022 ,	0
166	Dual-channel Geometric Meta-holograms with Complex-amplitude Modulation based on Bi-spectral Single-substrate-layer Meta-atoms.	1
165	Carbon nanotube/epoxy composites with low percolation threshold and negative dielectric constant.	0
164	Transmittance properties of one-dimensional metamaterial nanocomposite photonic crystal in GHz range. 2022 , 12,	0
163	Investigation of reflection bands of 1D annular photonic crystal containing double negative index material and non-magnetized plasma. 2022 , 62,	0
162	Metamaterial-enabled asymmetric negative refraction of GHz mechanical waves. 2022 , 13,	0
161	Bidirectional Acoustic Negative Refraction Based on a Pair of Identical Purely Imaginary Metamaterials Slabs. 2022 , 12, 9914	0
160	Sinusoidally located concrete metastructures for attenuation of seismic surface vibrations.	0
159	Tree-shaped fractal metamaterial multiband absorber for C- and X-band applications. 1-14	0
158	Negative refraction and mode trapping of flexural/torsional waves in elastic lattices. 2022 , 380,	1
157	A review on the research progress of mechanical meta-structures and their applications in rail transit.	0
156	Gradient Index Metasurface Lens for Microwave Imaging. 2022 , 22, 8319	0
155	Open-channel metal particle superlattices.	2
154	Towards Integrated Metadevices for Terahertz Silicon Plasmonics: A Review of Recent Progress. 2022 , 100030	0
153	Mixed Finite Element Numerical Mode Matching Method for Designing Infrared Broadband Polarization-Independent Metamaterial Absorbers.	0
152	Tunable terahertz electromagnetically induced transparency based on a composite structure superconducting metamaterial. 2022 , 61, 9398	0
151	Spatiotemporal chaos in a conservative Duffing-type system. 2022 , 165, 112776	0

- 150 Tailoring terahertz wavefront with state switching in VO2 PancharatnamBerry metasurfaces. **2023**, 157, 108764 2
- 149 Review of foundational concepts and emerging directions in metamaterial research: design, phenomena, and applications. 0
- 148 Millimeter Wave Reconfigurable Metasurface Intelligent Reflecting Surface Based on Piezoelectric Crystal for 5G and 6G; Generation of Wireless Communication. **2022**, 14, 109-118 0
- 147 A Programmable Complex Impedance IC for Scalable and Reconfigurable Meta-Atoms. **2022**, 1-12 0
- 146 Review on Panoramic Imaging and Its Applications in Scene Understanding. **2022**, 1-1 3
- 145 Novel Metamaterial Lined Probe for High Precision Planar Near Field Measurements. **2022**, 1-1 0
- 144 E-shaped split ring resonator used for metasurface- based metasurface-based structure with an ultra-high Q-factor for terahertz application. **2023**, 529, 129041 0
- 143 A Design of Thin-Layer Frequency Selective Surface with Wideband Tunability and Incidence Stability. **2022**, 0
- 142 On the Performance of a Composite Right Left Hand Electromagnetic Bandgap Structure. **2022**, 0
- 141 Theoretical Design of a Bionic Spatial 3D-Arrayed Multifocal Metalens. **2022**, 7, 200 1
- 140 Tailorable Switching of Transmission Modes between Waveguide and Spoof Surface Plasmon Polariton for Flexible and Dynamic Control of Phase Shift. **2022**, 14, 51510-51518 0
- 139 Grand challenges in metamaterial antennas. 1, 0
- 138 Dual-band metamaterial-based energy harvesting application for WLAN communication frequency bands. 0
- 137 Polarization-controlled tunable directional spin-driven photocurrents in a magnetic metamaterial with threefold rotational symmetry. **2022**, 13, 0
- 136 Propagation characteristics of adjustable abnormal hollow beams in gradient negative refractive index material. **2022**, 43, 106085 0
- 135 Impact of Conventional Saturable Function on Modulation Instability in Triangular Three-core Oppositely Directed Coupler With One Positive and Two Negative Index Material Channels. **2022**, 170271 0
- 134 Flexible and Polarization Independent Miniaturized Double-Band/Broadband Tunable Metamaterial Terahertz Filter. **2022**, 15, 8174 0
- 133 Research on spectroscopic ellipsometry in China with future challenges. **2022**, 139593 0

- 132 Detection of Strong Light-Matter Interaction in a Single Nanocavity with a Thermal Transducer. 0
- 131 3D printed propeller-like metamaterial for wide-angle and broadband microwave absorption. **2022**, 0
- 130 Direction-Dependent Janus Metasurface Supported by Waveguide Structure with Spoof Surface Plasmon Polariton Modes. 2200435 0
- 129 Tailoring Structure-Borne Sound through Bandgap Engineering in Phononic Crystals and Metamaterials: A Comprehensive Review. 2206309 5
- 128 Metasurface-Based Optical Analog Computing: From Fundamentals to Applications. **2022**, 2022, 0
- 127 Ultra-broadband spectrally selective absorber for solar thermal absorption based on TiN square-ring meta-structure. **2022**, 1-9 0
- 126 Spatial heterogeneity of the doping mode: A potential optical reconfiguration freedom of photonic doping epsilon-near-zero media. **2023**, 135, 113300 0
- 125 Optical modulated graphene metamaterial based on plasmon-induced transparency in the terahertz band: Application for sensing. **2023**, 131, 109613 0
- 124 From jammed solids to mechanical metamaterials : A brief review. **2023**, 27, 101053 0
- 123 Structural, electrical, magnetic & optical properties of Nickel, cobalt doped and Co-doped wurtzite GaN: A first-principle investigation. **2023**, 174, 207470 0
- 122 Terahertz generations of transmissive deflection, focusing, and orbital angular momentum with polarization conversion. **2023**, 159, 109036 0
- 121 Frequency Response Analysis of Octagonal Complementary Split Ring Resonator-Based Metamaterial. **2022**, 0
- 120 A Flexible Metamaterial Based on Split-Ring Resonator Design. **2022**, 0
- 119 Compact Metamaterial Antenna for WLAN Applications. **2022**, 0
- 118 Design and Parametric Analysis of a Wide-Angle and Polarization Insensitive Ultra-Broadband Metamaterial Absorber for Visible Optical Wavelength Applications. **2022**, 12, 4253 1
- 117 Broadband stealth devices based on encoded metamaterials. **2022**, 61, 10171 0
- 116 Artificial double-zero-index materials. 0
- 115 Dual-Function Metasurface for Tunable Selective Absorption. **2022**, 13, 2087 0

- 114 Independent control method for plasmonic skin depth based on transformation from spoof surface plasmon polaritons to bound states in the continuum. **2022**, 106, ○
- 113 Negative Refraction in Mechanical Rotator Lattices. **2022**, 18, ○
- 112 Radiative anti-parity-time plasmonics. **2022**, 13, ○
- 111 Study on the optically tunable negative refractive terahertz metamaterials. **2022**, ○
- 110 How Thin and Efficient Can a Metasurface Reflector Be? Universal Bounds on Reflection for Any Direction and Polarization. 2201782 1
- 109 Manipulating mid-infrared wavefront through reflective Ge₃Sb₂Te₆ metasurfaces. ○
- 108 Optical simulation of various phenomena in curved space on photonic chips. **2023**, 8, ○
- 107 Transmission Reflection Integrated Programmable Metasurface for Real-Time Beam Control and High Efficiency Transmission Polarization Conversion. 2200368 ○
- 106 Virtual Metasurfaces: Reshaping Electromagnetic Waves in Distance. ○
- 105 Tunable high- Q resonance and abnormal phase-shift in PT-symmetric meta-molecules. ○
- 104 Birefringence of Single Polarization for Flexural-Wave Metamaterials. **2022**, 18, ○
- 103 Effects of saturable function in three-core PIM-NIM-PIM coupler through modulation instability. **2023**, 55, ○
- 102 A high-gain quasi-Yagi antenna using nested metaresonator structures. ○
- 101 Metamaterial Lens for Nondestructive Evaluation of Composites. **2022**, 327-354 ○
- 100 Digital Programmable Metasurface with Element-Independent Visible-Light Sensing. **2023**, 12, 241 ○
- 99 Tunable MEMS-Based Terahertz Metamaterial for Pressure Sensing Application. **2023**, 14, 169 ○
- 98 Light control with Weyl semimetals. **2023**, 3, ○
- 97 Triple-band metamaterial perfect absorber for refractive index sensing in THz frequency. ○

96	Multiplication of photonic band gaps in one-dimensional photonic crystals by using hyperbolic metamaterial in IR range. 2023 , 13,	1
95	Effective Constitutive Parameters Extraction of Bianisotropic Metamaterials using Bloch Modes. 2023 , 1-1	o
94	Single-Row Coding Metasurface for Bi-directional Beam Multiplexing in Mid-infrared Regime.	o
93	Transmission properties in Fibonacci quasi-periodic photonic crystal containing negative-zero-positive index metamaterials.	o
92	Star enclosed circle split ring resonator-based metamaterial sensor for fuel and oil adulteration detection. 2023 , 67, 547-563	o
91	Cost efficient fabrication of flexible polymer metacomposites: Impact of carbon in achieving tunable negative permittivity at low radio frequency range. 2023 , 34, 105287	o
90	A Dual-frequency Metasurface Narrowband Absorber for Refractive Index Sensing. 2022 ,	o
89	Effective Modeling Method of Single Antenna above Meta-surfaces in FDTD Method. 2022 ,	o
88	Design for the reconfigurable polarization rotator by inhibiting Fano resonance with graphene-metal grating structures. 1-29	o
87	Metamaterial Applications in Modern Antennas.	o
86	Terahertz Broadband Adjustable Absorber Based on VO2 Multiple Ring Structure. 2023 , 13, 252	o
85	Nonreciprocal negative refraction in a dense hot atomic medium.	o
84	Machine learning assisted hepta band THz metamaterial absorber for biomedical applications. 2023 , 13,	2
83	Broadband Polarization-Reconfigurable Converter Using Active Metasurfaces. 2023 , 1-1	o
82	Performance enhancement of waveguide-coupled and metamaterial surface plasmon resonance sensors based on silver-bismuth ferrite and graphene. 2023 , 34,	o
81	Quantum dispersion properties of eigenmodes in semiconductor nanotubes with dielectric filling in dc magnetic field. 2023 , 49, 3-14	o
80	Recent Advances in Reconfigurable Metasurfaces: Principle and Applications. 2023 , 13, 534	o
79	Interaction of Light with Solids. 2023 , 369-427	o

- 78 A Full-Vectorial Spectral Element Method with Generalized Sheet Transition Conditions for High-Efficiency Metasurface/Metafilm Simulation. **2023**, 1-1 ○
- 77 Magnetic plasmons in plasmonic nanostructures: An overview. **2023**, 133, 030902 ○
- 76 Equilibrium between energies involving mass and energies not involving mass in terms of atoms. ○
- 75 Independent Manipulation of Aperture and Radiation Fields in a Transmission-Reflection Integrated Complex-Amplitude Metasurface. 2201192 ○
- 74 Near perfect and polarization insensitive broadband absorber based on Al₂O₃ - Ti - Al₂O₃ triple layer structure. **2023**, 98, 025511 ○
- 73 Geometric-phase metalens to be used for tunable optical tweezers in microfluidics. 1-11 ○
- 72 High-Sensitivity Sensing in All-Dielectric Metasurface Driven by Quasi-Bound States in the Continuum. **2023**, 13, 505 ○
- 71 Metamaterial enhanced novel plasmonic biosensor for specific detection of SARS-CoV-2 spike protein. **2023**, ○
- 70 Spektral olarak ayarlanabilir ve polarizasyon bağımsız çift bant plazmonik mikrometrik sensörün sayısal analizi. ○
- 69 Broadband RCS Reduction Using Single Layer Random Coding Polarization Conversion Metasurface. **2022**, ○
- 68 Mechanical metamaterials made of freestanding quasi-BCC nanolattices of gold and copper with ultra-high energy absorption capacity. **2023**, 14, ○
- 67 Employing metamaterial and Ti₃C₂T_x (MXene) material for cancer cells detection using defective 1D photonic crystal. **2023**, 55, ○
- 66 Terahertz metamaterial using reconfigurable H-shaped resonator with tunable perfect absorption characteristic. **2023**, 35, 105700 ○
- 65 Bicontrollable all dielectric metasurface absorber for chemical and biosensing applications. **2023**, 54, 101116 ○
- 64 Transformed thermal meta-devices for manipulating macroscopic thermal fields. **2023**, 9, 3716-3732 ○
- 63 Ultra-Broadband RCS Reduction Using "Bow-Shaped" Polarization Conversion Metasurface. **2022**, ○
- 62 Non-Hermitian guided modes and exceptional points using loss-free negative-index materials. **2023**, 31, 14109 ○
- 61 Negative refraction and exceptional point with Parity-Time symmetry in a piezoelectric mechanical metamaterial. **2023**, 181, 104647 ○

- 60 Plasmonic field-regulating characteristics of alloy-based multilaminar films in 300800 nm. **2023**, 9, e13084 o
- 59 Towards Functional Metamaterials and Metadevices. **2022**, o
- 58 Nanoscale Characterization of Individual Three-Dimensional Split Ring Resonator Systems. **2023**, 1, 607-614 1
- 57 Terahertz isotropic transmissive metasurfaces for generation of different wavefronts. **2023**, 141, 45001 o
- 56 Extreme Metasurfaces Enable Targeted and Protected Wireless Energy Transfer. 2202133 o
- 55 Pulse-driven self-reconfigurable meta-antennas. **2023**, 14, o
- 54 An X-band and Ku-band adjustable polarization insensitive AFSS reflector. **2021**, o
- 53 Active Self-Tuning Metasurface Radome for High-Power Microwave. **2021**, o
- 52 Wideband 5G Antenna Gain Enhancement Using a Compact Single-Layer Millimeter Wave Metamaterial Lens. **2023**, 11, 14928-14942 o
- 51 Topological phases and non-Hermitian topology in photonic artificial microstructures. **2023**, o
- 50 Modified nonlinear saturable effects on instability characteristics in three-core oppositely directed coupler with Kerr nonlinearity. **2023**, 277, 170699 o
- 49 Strongly suppressed diffuse scattering in periodic graphene metamaterials. **2023**, 40, 759 o
- 48 Terahertz Metasurfaces, Metawaveguides, and Applications. **2023**, 127-156 o
- 47 High temperature microwave absorbing materials. **2023**, 11, 4552-4569 o
- 46 Sensing Performance Analysis of Spiral Metasurface Utilizing Phase Spectra Measurement Technique. **2023**, 10, 243 o
- 45 Switchable Unidirectional Radiation from Huygens Dipole Formed at an Exceptional Point in Non-Hermitian Plasmonic Systems. **2023**, 10, 667-672 1
- 44 A NRI-TL Metamaterial Based Dual-band Phase Shifter. **2022**, o
- 43 The SHI irradiation induced transition to negative dielectric constant phase in K₂Bi₄Ti₄WO₁₈. 11, o

- 42 Coupling-enabled chirality in terahertz metasurfaces. **2023**, 12, 1317-1326 ○
- 41 Optical perfectly matched layers based on the integration of photonic crystals and material loss. **2023**, 31, 11080 ○
- 40 ?????????3D?????. **2023**, 66, 1283-1312 ○
- 39 Fluid-like elastic metasurface. **2023**, 122, 101701 ○
- 38 Optimal active particle navigation meets machine learning (a). **2023**, 142, 17001 ○
- 37 Band Structure Engineering of MXenes for Low-Loss Visible Epsilon-Near-Zero Properties by First-Principles Calculation. 2201119 ○
- 36 Design of Artificial Metamaterial Absorber Based on Stacking Method. **2023**, 2023, 1-10 ○
- 35 Negative refraction in multilayered metal-dielectric metamaterials with ellipse-like isofrequency surfaces. **2023**, 98, 045512 ○
- 34 Design and Print Terahertz Metamaterials Based on Electrohydrodynamic Jet. **2023**, 14, 659 ○
- 33 Triple-band metamaterial perfect absorber for refractive index sensing in THz frequency. **2023**, 55, ○
- 32 Deep neural network-aided design of terahertz bifunctional metasurface. **2023**, 47, 106333 ○
- 31 ON THE NEW TYPES OF COMPOSITE METAMATERIALS. **2022**, 3, 53-65 ○
- 30 Visible and infrared dual-band anti-counterfeiting with self-assembled photonic heterostructures. **2023**, 31, 13875 ○
- 29 Nanophotonic Devices and Platforms. **2023**, 35-76 ○
- 28 Broad band solar cell absorber based on double-ring coupled disk resonator structure: from visible to mid infrared. **2023**, 98, 045513 ○
- 27 Data-Driven Surrogate-Assisted Optimization of Metamaterial-Based Filtenna Using Deep Learning. **2023**, 12, 1584 ○
- 26 Negative refraction in hyperbolic hetero-bicrystals. **2023**, 379, 555-557 ○
- 25 Advances in Meta-Optics and Metasurfaces: Fundamentals and Applications. **2023**, 13, 1235 ○

- 24 Low-frequency noise mitigation and bandgap engineering using seismic metamaterials for terrestrial gravitational wave observatories. **2023**, 2023, ○
- 23 Gate-tunable negative refraction of mid-infrared polaritons. **2023**, 379, 558-561 ○
- 22 Meta-optics inspired surface plasmon devices. **2023**, 2, R02 ○
- 21 Revolutionary meta-imaging: from superlens to metalens. **2023**, 2, R01 ○
- 20 Software-defined nanophotonic devices and systems empowered by machine learning. **2023**, 100469 ○
- 19 PEEC Model Based on a Novel Quasi-Static Green's Function for Two-Dimensional Periodic Structures. **2023**, 8, 187-194 ○
- 18 A review of light-controlled programmable metasurfaces for remote microwave control and hybrid signal processing. ○
- 17 Double broadband enhanced absorber based on graphene-coupled metal disk resonator structure. **2023**, 129486 ○
- 16 Tunable terahertz metamaterial using electric split-ring resonator with refractive index sensing characteristic. **2023**, 115740 ○
- 15 Accurate inverse design for high-efficiency and broadband terahertz devices by co-simulation with genetic algorithms. ○
- 14 Polarization-Insensitive Terahertz Tunable Broadband Metamaterial Absorber on U-shaped Graphene Array. **2023**, ○
- 13 Ultra narrowband perfect absorber for refractive index sensing applications in mid-infrared region. 1-11 ○
- 12 Design of polarization conversion metasurface for arbitrary polarized wave. **2023**, 129529 ○
- 11 Molecularly Resonant Metamaterials for Broad-Band Electromagnetic Stealth. ○
- 10 Metamaterial-FSS for the Design of High-Performance Radome. **2022**, 3-62 ○
- 9 Spin-Current-Driven Permeability Variation for Time-Varying Magnetic Metamaterials. **2023**, 19, ○
- 8 Validation of an X-band Linear Tunable Active Reflection Electromagnetic Metasurface. **2022**, ○
- 7 Spatial modulation of refractive index in a dense atomic ensemble using Laguerre-Gaussian beams. **2023**, 133, ○

- 6 A Low-Profile Folded Programmable Metasurface Using 1-Bit Polarization-Converted Coding Element. **2022**, ○
- 5 Near-unity broadband infrared absorption in a graphene-black phosphorus bimodal triple-layer structure. **2023**, 13, 1535 ○
- 4 Study of Inductive Reactance of a Micro Strip Line Structure with The Spacing Between Two Metal Strip. **2023**, 138-142 ○
- 3 A Tungsten inspired SIR-MM absorber for energy harvesting applications with polarization insensitivity in the visible range. ○
- 2 Study of Planar Transmission Structure and Dependence of Characteristic Impedance for Even and Odd-Modes on Spacing Between Two Metal Strips. **2023**, 170-173 ○
- 1 Study of The Directivity of Microstripline Directional Coupler and Its Dependence on Stripwidth. **2023**, 143-146 ○