

Munir Hasan Nayfeh

List of Publications by Year in descending order

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97
papers

1,513
citations

331259

21
h-index

344852

36
g-index

101
all docs

101
docs citations

101
times ranked

1281
citing authors

#	ARTICLE	IF	CITATIONS
1	Oxide and hydrogen capped ultrasmall blue luminescent Si nanoparticles. Applied Physics Letters, 2000, 77, 779-781.	1.5	161
2	Brushed-on flexible supercapacitor sheets using a nanocomposite of polyaniline and carbon nanotubes. Journal of Power Sources, 2010, 195, 7480-7483.	4.0	94
3	Ideal anodization of silicon. Applied Physics Letters, 1997, 70, 3404-3406.	1.5	78
4	Flexible supercapacitor sheets based on hybrid nanocomposite materials. Nano Energy, 2013, 2, 133-137.	8.2	69
5	Supercapacitor electrodes based on polyaniline-silicon nanoparticle composite. Journal of Power Sources, 2010, 195, 3956-3959.	4.0	67
6	Photoexcitation of Si-Si surface states in nanocrystallites. Physical Review B, 1997, 56, 2079-2084.	1.1	61
7	Stark-induced resonances in the photoionization of hydrogen. Physical Review A, 1985, 31, 530-532.	1.0	55
8	Red to green rainbow photoluminescence from unoxidized silicon nanocrystallites. Journal of Applied Physics, 1998, 83, 3929-3931.	1.1	52
9	Spectroscopy between parabolic states in hydrogen: Enhancement of the Stark-induced resonances in its photoionization. Physical Review A, 1985, 31, 3677-3685.	1.0	51
10	Memory effects in metal-oxide-semiconductor capacitors incorporating dispersed highly monodisperse 1nm silicon nanoparticles. Applied Physics Letters, 2007, 90, 153105.	1.5	36
11	Molecular behavior in the vibronic and excitonic properties of hydrogenated silicon nanoparticles. Physical Review B, 2007, 76, .	1.1	33
12	Fluorescent Si nanoparticle-based electrode for sensing biomedical substances. Optics Communications, 2008, 281, 1765-1770.	1.0	33
13	A hybrid biofuel cell based on electrooxidation of glucose using ultra-small silicon nanoparticles. Biosensors and Bioelectronics, 2009, 24, 3103-3107.	5.3	30
14	Photoionization spectrum of H in strong dc electric fields. Physical Review A, 1987, 35, 2508-2517.	1.0	29
15	Room temperature oxidation enhancement of porous Si(001) using ultraviolet-ozone exposure. Journal of Applied Physics, 1996, 80, 5415-5421.	1.1	27
16	Enhanced performance of thin-film amorphous silicon solar cells with a top film of 2.85 nm silicon nanoparticles. Solar Energy, 2016, 125, 332-338.	2.9	25
17	Collisional Line Broadening Using Laser Excitation and Ionization. Physical Review Letters, 1977, 39, 604-607.	2.9	24
18	SILICON NANOPARTICLES. , 2008, , 1-78.		24

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19	On the Detection of the Signature of Silicon Nanoparticle Dust Grains in Coronal Holes. <i>Astrophysical Journal</i> , 2003, 592, L87-L90.	1.6	23
20	Re-establishment of photoluminescence in Cu quenched porous silicon by acid treatment. <i>Journal of Applied Physics</i> , 1995, 77, 4130-4132.	1.1	22
21	Light-induced conductance resonance in ultrasmall Si nanoparticles. <i>Applied Physics Letters</i> , 2000, 77, 1668-1670.	1.5	22
22	Enhanced non-volatile memory characteristics with quattro-layer graphene nanoplatelets vs. 2.85-nm Si nanoparticles with asymmetric Al ₂ O ₃ /HfO ₂ tunnel oxide. <i>Nanoscale Research Letters</i> , 2015, 10, 957.	3.1	22
23	Two-photon ionization of colliding atoms. <i>Physical Review A</i> , 1977, 16, 927-932.	1.0	21
24	Radiative collision-induced photoionization. <i>Physical Review A</i> , 1978, 17, 1695-1705.	1.0	21
25	The effect of ultrathin oxides on luminescent silicon nanocrystallites. <i>Applied Physics Letters</i> , 1998, 73, 841-843.	1.5	20
26	Enhanced amperometric detection of glucose using Si ₂₉ particles. <i>Applied Physics Letters</i> , 2006, 89, 243901.	1.5	20
27	Synthesis, characterization and electrical properties of highly conductive polyaniline/gold and/or platinum nanocomposites. <i>Synthetic Metals</i> , 2015, 205, 145-152.	2.1	18
28	Uniform delivery of silicon nanoparticles on device quality substrates using spin coating from isopropyl alcohol colloids. <i>Applied Physics Letters</i> , 2009, 94, 043112.	1.5	17
29	A silicon nanoparticle-based polymeric nano-composite material for glucose sensing. <i>Journal of Electroanalytical Chemistry</i> , 2011, 657, 172-175.	1.9	17
30	Silicon nanoparticle-ZnS nanophosphors for ultraviolet-based white light emitting diode. <i>Journal of Applied Physics</i> , 2012, 112, .	1.1	17
31	Revival of interband crystalline reflectance from nanocrystallites in porous silicon by immersion plating. <i>Applied Physics Letters</i> , 1999, 74, 3483-3485.	1.5	16
32	Excitation of size selected nanocrystallites in porous silicon. <i>Applied Physics Letters</i> , 1998, 72, 2556-2558.	1.5	15
33	Crystalline Si Nanoparticles as Carriers of the Blue Luminescence in the Red Rectangle Nebula. <i>Astrophysical Journal</i> , 2005, 621, L121-L124.	1.6	14
34	Electric-field-induced resonances in the photoionization of excited krypton. <i>Physical Review A</i> , 1983, 28, 3682-3685.	1.0	13
35	Collision-induced three-photon ionization. <i>Physical Review A</i> , 1979, 20, 1927-1933.	1.0	11
36	Adiabatic following in two-photon transition. <i>Physical Review A</i> , 1977, 15, 1169-1172.	1.0	10

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37	Two-photon laser-induced radiative collisions. <i>Physical Review A</i> , 1981, 24, 1409-1412.	1.0	10
38	Assemblies of silicon nanoparticles roll up into flexible nanotubes. <i>Applied Physics Letters</i> , 2005, 87, 062104.	1.5	10
39	Soluble silicon nanoparticlesâ€“polyaniline capsules for biosensing and imaging. <i>Journal of Materials Research</i> , 2013, 28, 210-215.	1.2	10
40	Strong 1.54â€“m cathodoluminescence from core-shell structures of silicon nanoparticles and erbium. <i>Applied Physics Letters</i> , 2016, 109, .	1.5	10
41	Strong Reduction in Ge Film Reflectivity by an Overlayer of 3 nm Si Nanoparticles: Implications for Photovoltaics. <i>ACS Applied Nano Materials</i> , 2021, 4, 4602-4614.	2.4	10
42	Three-photon excitation of hydrogen Rydberg states. <i>Optics Letters</i> , 1983, 8, 30.	1.7	9
43	Correlation of diffuse scattering with nanocrystallite size in porous silicon using transmission microscopy. <i>Journal of Applied Physics</i> , 1999, 85, 8050-8053.	1.1	9
44	<i>Optics in Nanotechnology</i> . , 2016, , 223-264.		9
45	Observation of New Satellites in the Cs-Ar System Using Resonance Ionization Spectroscopy. <i>Physical Review Letters</i> , 1978, 41, 302-305.	2.9	8
46	Observation of linear solid-solid phase transformation in silicon nanoparticles. <i>Physical Review B</i> , 2012, 85, .	1.1	8
47	Imparting optical functionality to aromatic thermosetting copolyester by luminescent silicon nanoparticles cross-linked via in situ thermal polymerization reaction. <i>European Polymer Journal</i> , 2018, 103, 351-361.	2.6	8
48	Polarization-based surface enhanced Raman scattering from single colloidal DNA decorated with 3Ånm silicon nanoparticles. <i>AIP Advances</i> , 2021, 11, .	0.6	8
49	Continuum-state selectivity in hydrogen in Stark fields by charge-shape tuning. <i>Physical Review A</i> , 1987, 35, 1945-1948.	1.0	7
50	Wet non-thermal integration of nano binary silicon-gold system with strong plasmonic and luminescent characteristics. <i>AIP Advances</i> , 2019, 9, .	0.6	7
51	Excitation and ionization of hydrogen Rydberg states in a plasma. <i>Optics Letters</i> , 1982, 7, 380.	1.7	6
52	Electro-oxidation of organic fuels catalyzed by ultrasmall silicon nanoparticles. <i>Applied Physics Letters</i> , 2008, 93, 164103.	1.5	6
53	Synthesis of wirelike silicon nanostructures by dispersion of silicon on insulator using electroless etching. <i>Journal of Applied Physics</i> , 2010, 108, 124321.	1.1	6
54	Silicon nanoparticle-functionalized fiberglass pads for sampling. <i>Journal of Applied Physics</i> , 2011, 109, 064321.	1.1	6

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55	Double resonance via continuum states: Ionization quantum beats. <i>Physical Review A</i> , 1982, 25, 1619-1622.	1.0	5
56	Intensity-induced quenching of absorption of diatomic molecules in two near-resonance laser fields. <i>Physical Review A</i> , 1982, 26, 1988-1991.	1.0	5
57	Stimulated Blue Emission and Second Harmonic Generation From Films of Ultrasmall Si Nanoparticles. <i>Materials Research Society Symposia Proceedings</i> , 2000, 638, 1.	0.1	5
58	Experimental and theoretical study of ultraviolet-induced structural/optical instability in nano silicon-based luminescence. <i>Journal of Applied Physics</i> , 2018, 124, .	1.1	5
59	Emission and gain studies of the Tl-Hg excimer. <i>Journal of Applied Physics</i> , 1978, 49, 5378-5381.	1.1	4
60	Effect of relaxation on self-induced transparency. <i>Physical Review A</i> , 1978, 18, 1124-1128.	1.0	4
61	Self-induced transparency in two-photon transition. <i>Physical Review A</i> , 1978, 18, 2550-2556.	1.0	4
62	Laser-induced "two-atom" coherence. <i>Physical Review A</i> , 1984, 29, 1907-1913.	1.0	4
63	Polyaniline-Si Nanoparticle Nanocapsules as a Dual Photovoltaic Sensitizer. <i>Materials Research Society Symposia Proceedings</i> , 2013, 1500, 1.	0.1	4
64	Wideband luminescence from bandgap-matched Mg-based Si core-shell geometry nanocomposite. <i>AIP Advances</i> , 2018, 8, 055324.	0.6	4
65	Iron oxide-Si nanoparticle magnetic core-shell induced by the interaction of d-orbitals of Fe ²⁺ with reconstructed Si dimer-like defects. <i>AIP Advances</i> , 2020, 10, 055221.	0.6	4
66	Population difference of two-level atomic system due to a running pulsed field. <i>Journal of Applied Physics</i> , 1975, 46, 4862-4864.	1.1	3
67	Double resonance with pulsed fields. <i>Physical Review A</i> , 1979, 19, 1666-1672.	1.0	3
68	Laser induced phase locking of hydrogen plasma striations. <i>Applied Physics Letters</i> , 1982, 40, 574-575.	1.5	3
69	Overtone absorption in a two-overtone frequency field. <i>Physical Review A</i> , 1984, 30, 295-298.	1.0	3
70	~423% increase in efficiency of 100 nm thin film a-si solar cells using combination of Si/InN and Au nanoparticles. , 2015, , .		3
71	Electrostatically enhanced performance of a yeast-based microbial fuel cell. <i>RSC Advances</i> , 2015, 5, 19203-19205.	1.7	3
72	Layer-by-Layer Growth of Charged Polymers and Silicon Nanoparticles. <i>BioNanoScience</i> , 2016, 6, 147-152.	1.5	3

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73	Tunable plasmonâ€“polarizmon resonance and hotspots in metalâ€“silicon coreâ€“shell nanostructures. AIP Advances, 2021, 11, .	0.6	3
74	Collision-induced dipole transitions and collisional broadening of quadrupole transitions. Physical Review A, 1981, 24, 1142-1145.	1.0	2
75	Electric field enhancement of depolarization of excited states. Physical Review A, 1985, 32, 3324-3329.	1.0	2
76	$m_l=1$ photoionization spectrum of hydrogen in strong dc electric fields. Physical Review A, 1987, 36, 4072-4075.	1.0	2
77	Classical chaos in one-dimensional hydrogen in strong dc electric fields. Physical Review A, 1989, 40, 3727-3735.	1.0	2
78	One-dimensional hydrogen in low-frequency radiation: Frequency-modulated hydrogen. Physical Review A, 1989, 40, 3736-3742.	1.0	2
79	Electrodeposition of Fluorescent Si Nanomaterial From Acidic Sodium Silicate Solutions. Materials Research Society Symposia Proceedings, 2005, 862, 8101.	0.1	2
80	Proximal probe-like nano structuring in metal-assisted etching of silicon. AIP Advances, 2019, 9, 055228.	0.6	2
81	Dynamic transition of nanosilicon from indirect to direct-like nature by strain-induced structural relaxation. AIP Advances, 2021, 11, .	0.6	2
82	Worrying about Climate Change. Atmospheric and Climate Sciences, 2022, 12, 441-461.	0.1	2
83	Resonance Ionization Spectroscopy Of Atoms And Molecules. Optical Engineering, 1980, 19, .	0.5	1
84	Highly Excited Hydrogen in Strong D.C. Electric Fields: Atomic Engineering. Journal of Modern Optics, 1988, 35, 297-314.	0.6	1
85	Lasing Effects In Ultrasmall Silicon Nanoparticles. , 2003, , 165-180.		1
86	Laser Oscillation in Aggregates of Ultrasmall Si Nanoparticles. Materials Research Society Symposia Proceedings, 2002, 728, 661.	0.1	1
87	Study of Polyethylene Fibers Used in Masks Via Luminescent Aerosolized Silicon Nanoparticles. Silicon, 2022, 14, 6981-6991.	1.8	1
88	Novel synthetic route for growth of gold nanorods via semiconductor procedure. Materials Physics and Chemistry, 2019, 1, 20.	0.4	1
89	Timeâ€“thermo-dynamics of anti-Stokes and Stokes scattering and luminescence in 1-nm silicon nanoparticles: Toward an optical nanorefrigerator. AIP Advances, 2022, 12, 065219.	0.6	1
90	Observation of collisional narrowing in a two-photon transition in a three-level system. Physical Review A, 1982, 25, 3431-3434.	1.0	0

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91	Radiative collision-induced electron continuum-continuum scattering. Physical Review A, 1983, 28, 1395-1400.	1.0	0
92	Effect of dephasing on the molecular absorption in a two-frequency field. Journal of Applied Physics, 1984, 56, 1944-1947.	1.1	0
93	Localized chaos in one-dimensional hydrogen. Physical Review A, 1990, 42, 1592-1600.	1.0	0
94	Memory Effects in Metal-Oxide-Semiconductor Capacitors Incorporating Dispersed Highly Mono-disperse One-Nanometer Silicon Nanoparticles. , 2007, , .		0
95	Si29 Nanoparticles: A New Form of Silicon. , 2002, , 487-503.		0
96	Adiabatic Following in Two-Photon Transition. , 1978, , 383-393.		0
97	H2 in Intense Laser Radiation " Multiphoton Two Electron Direct Processes. , 1988, , 393-407.		0