

Rainer F Mahrt

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

135
papers

7,722
citations

41
h-index

86
g-index

157
ext. papers

8,428
ext. citations

8.4
avg, IF

5.5
L-index

#	Paper	IF	Citations
135	Structural Diversity in Multicomponent Nanocrystal Superlattices Comprising Lead Halide Perovskite Nanocubes.. <i>ACS Nano</i> , 2022 ,	16.7	4
134	Monodisperse Long-Chain Sulfobetaine-Capped CsPbBr Nanocrystals and Their Superfluorescent Assemblies. <i>ACS Central Science</i> , 2021 , 7, 135-144	16.8	22
133	Tunable exciton-polariton condensation in a two-dimensional Lieb lattice at room temperature. <i>Communications Physics</i> , 2021 , 4,	5.4	7
132	Perovskite-type superlattices from lead halide perovskite nanocubes. <i>Nature</i> , 2021 , 593, 535-542	50.4	49
131	Enhanced Room-Temperature Photoluminescence Quantum Yield in Morphology Controlled J-Aggregates. <i>Advanced Science</i> , 2021 , 8, 1903080	13.6	8
130	Low-loss optical waveguides made with a high-loss material. <i>Light: Science and Applications</i> , 2021 , 10, 15	16.7	7
129	Single-photon nonlinearity at room temperature. <i>Nature</i> , 2021 , 597, 493-497	50.4	17
128	Shape-Directed Co-Assembly of Lead Halide Perovskite Nanocubes with Dielectric Nanodisks into Binary Nanocrystal Superlattices. <i>ACS Nano</i> , 2021 , 15, 16488-16500	16.7	6
127	Unraveling the Origin of the Long Fluorescence Decay Component of Cesium Lead Halide Perovskite Nanocrystals. <i>ACS Nano</i> , 2020 , 14, 14939-14946	16.7	8
126	A room-temperature organic polariton transistor. <i>Nature Photonics</i> , 2019 , 13, 378-383	33.9	92
125	All-Optical Exciton-Polariton Transistor at Room Temperature 2019 ,		2
124	Exciton Dynamics and Effects of Structural Order in Morphology-Controlled J-Aggregate Assemblies. <i>Advanced Functional Materials</i> , 2019 , 29, 1806997	15.6	11
123	Bright triplet excitons in caesium lead halide perovskites. <i>Nature</i> , 2018 , 553, 189-193	50.4	517
122	Room-Temperature Exciton-Polariton Condensation in a Tunable Zero-Dimensional Microcavity. <i>ACS Photonics</i> , 2018 , 5, 85-89	6.3	22
121	Superfluorescence from lead halide perovskite quantum dot superlattices. <i>Nature</i> , 2018 , 563, 671-675	50.4	240
120	Long Exciton Dephasing Time and Coherent Phonon Coupling in CsPbBrCl Perovskite Nanocrystals. <i>Nano Letters</i> , 2018 , 18, 7546-7551	11.5	34
119	Lasing Supraparticles Self-Assembled from Nanocrystals. <i>ACS Nano</i> , 2018 , 12, 12788-12794	16.7	33

118	On-Chip Integrated Quantum-Dot-Silicon-Nitride Microdisk Lasers. <i>Advanced Materials</i> , 2017 , 29, 16048664	54
117	Control of the interaction strength of photonic molecules by nanometer precise 3D fabrication. <i>Scientific Reports</i> , 2017 , 7, 16502	4.9 13
116	Single Cesium Lead Halide Perovskite Nanocrystals at Low Temperature: Fast Single-Photon Emission, Reduced Blinking, and Exciton Fine Structure. <i>ACS Nano</i> , 2016 , 10, 2485-90	16.7 239
115	Integrated Silicon Nitride Microdisk Lasers Based on Quantum Dots 2016 ,	2
114	Zero-Dimensional Organic Exciton-Polaritons in Tunable Coupled Gaussian Defect Microcavities at Room Temperature. <i>ACS Photonics</i> , 2016 , 3, 1542-1545	6.3 21
113	Band structure engineering via piezoelectric fields in strained anisotropic CdSe/CdS nanocrystals. <i>Nature Communications</i> , 2015 , 6, 7905	17.4 48
112	Exciton-polariton Bose-Einstein condensation with a polymer at room temperature 2015 ,	2
111	Room-temperature Bose-Einstein condensation of cavity exciton-polaritons in a polymer. <i>Nature Materials</i> , 2014 , 13, 247-52	27 429
110	Quantum fluids in solid materials. <i>Materials Today</i> , 2014 , 17, 258-259	21.8
109	Impact of the Band-Edge Fine Structure on the Energy Transfer between Colloidal Quantum Dots. <i>Advanced Optical Materials</i> , 2014 , 2, 126-130	8.1 11
108	Vertical microcavities with high Q and strong lateral mode confinement. <i>Physical Review B</i> , 2013 , 87,	3.3 27
107	Integrated vertical microcavity using a nano-scale deformation for strong lateral confinement. <i>Applied Physics Letters</i> , 2013 , 103, 243305	3.4 11
106	Controlling the exciton fine structure splitting in CdSe/CdS dot-in-rod nanojunctions. <i>ACS Nano</i> , 2012 , 6, 1979-87	16.7 46
105	Exciton dynamics within the band-edge manifold states: the onset of an acoustic phonon bottleneck. <i>Nano Letters</i> , 2012 , 12, 5224-9	11.5 23
104	Nearly temperature-independent threshold for amplified spontaneous emission in colloidal CdSe/CdS quantum dot-in-rods. <i>Advanced Materials</i> , 2012 , 24, OP231-5	24 60
103	Plasmonic nanohybrid with ultrasmall Ag nanoparticles and fluorescent dyes. <i>ACS Nano</i> , 2011 , 5, 3536-41	16.7 28
102	Band-edge exciton fine structure of small, nearly spherical colloidal CdSe/ZnS quantum dots. <i>ACS Nano</i> , 2011 , 5, 8033-9	16.7 52
101	Probing the wave function delocalization in CdSe/CdS dot-in-rod nanocrystals by time- and temperature-resolved spectroscopy. <i>ACS Nano</i> , 2011 , 5, 4031-6	16.7 135

100	Design and optical characterization of photonic crystal lasers with organic gain material. <i>Journal of Optics (United Kingdom)</i> , 2010 , 12, 065003	1.7	14
99	Ultrafast all-optical modulator with femtojoule absorbed switching energy in silicon-on-insulator. <i>Optics Express</i> , 2010 , 18, 22485-96	3.3	24
98	Ultracompact silicon/polymer laser with an absorption-insensitive nanophotonic resonator. <i>Nano Letters</i> , 2010 , 10, 3675-8	11.5	18
97	Dye molecules encapsulated in a micelle structure: nano-aggregates with enhanced optical properties. <i>Advanced Materials</i> , 2010 , 22, 3681-4	24	21
96	Polarization-Independent Photodetectors With Enhanced Responsivity in a Standard Silicon-on-Insulator Complementary MetalOxideSemiconductor Process. <i>Journal of Lightwave Technology</i> , 2009 , 27, 4892-4896	4	1
95	Circular grating resonators as small mode-volume microcavities for switching. <i>Optics Express</i> , 2009 , 17, 5953-64	3.3	7
94	Ultra-high quality-factor resonators with perfect azimuthal modal-symmetry. <i>Optics Express</i> , 2009 , 17, 20998-1006	3.3	6
93	Energy transfer in hybrid organic/inorganic nanocomposites. <i>Nano Letters</i> , 2009 , 9, 453-6	11.5	72
92	Fabrication and characterization of Ta2O5 photonic feedback structures. <i>Microelectronic Engineering</i> , 2008 , 85, 1425-1428	2.5	7
91	Control of Fano line shapes by means of photonic crystal structures in a dye-doped polymer. <i>Applied Physics Letters</i> , 2007 , 90, 201105	3.4	11
90	Resonant energy transfer within a colloidal nanocrystal polymer host system. <i>Applied Physics Letters</i> , 2007 , 90, 071108	3.4	26
89	Picosecond time resolved photoluminescence spectroscopy of a tetracene film on highly oriented pyrolytic graphite: dynamical relaxation, trap emission, and superradiance. <i>Journal of Chemical Physics</i> , 2007 , 127, 114705	3.9	41
88	Organic mixed-order photonic crystal lasers with ultrasmall footprint. <i>Applied Physics Letters</i> , 2007 , 91, 171108	3.4	20
87	Analytical calculation of the Q factor for circular-grating microcavities. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2007 , 24, 906	1.7	10
86	Enhanced feedback and experimental band mapping of organic photonic-crystal lasers. <i>Journal of Optics</i> , 2006 , 8, S273-S277		3
85	A pump-and-probe method for the characterization of nonlinear material parameters within Fabry-Pérot microcavities. <i>Journal of Applied Physics</i> , 2006 , 100, 043112	2.5	2
84	Integrated all-optical switch in a cross-waveguide geometry. <i>Applied Physics Letters</i> , 2006 , 88, 171104	3.4	25
83	In-Plane Coupling into Circular-Grating Resonators for All-Optical Switching 2006 ,		1

82	Enhanced feedback in organic photonic-crystal lasers. <i>Applied Physics Letters</i> , 2005 , 87, 151121	3.4	17
81	Lasing in interferometrically structured organic materials. <i>Applied Physics Letters</i> , 2005 , 87, 241124	3.4	2
80	Enhancement of the mode coupling in photonic-crystal-based organic lasers. <i>Journal of Optics</i> , 2005 , 7, S230-S234		9
79	Lasing in organic circular grating structures. <i>Journal of Applied Physics</i> , 2004 , 96, 3043-3049	2.5	27
78	SU-8 for real three-dimensional subdiffraction-limit two-photon microfabrication. <i>Applied Physics Letters</i> , 2004 , 84, 4095-4097	3.4	90
77	Photonic engineering of nonlinear-optical properties of hybrid materials for efficient ultrafast optical switching (PHOENIX) 2004 , 5464, 39		
76	Two-Photon Pumped Lasing from a Two-Dimensional Photonic Bandgap Structure with Polymeric Gain Material. <i>Advanced Materials</i> , 2002 , 14, 673-676	24	56
75	Dependence of Rabi-splitting on the spatial position of the optically active layer in organic microcavities in the strong coupling regime. <i>Chemical Physics</i> , 2002 , 285, 113-120	2.3	22
74	Evidence for bandedge lasing in a two-dimensional photonic bandgap polymer laser. <i>Applied Physics Letters</i> , 2002 , 80, 734-736	3.4	34
73	Nonequilibrium polariton dynamics in organic microcavities. <i>Physical Review B</i> , 2002 , 66,	3.3	21
72	Polarization-sensitive photoconductivity in aligned polyfluorene layers. <i>Applied Physics Letters</i> , 2002 , 80, 4699-4701	3.4	27
71	Solid-state optical properties of the methyl-exopyridineanthracene rotaxane. <i>Chemical Physics</i> , 2001 , 269, 381-388	2.3	
70	Observation of strong excitonphoton coupling in an organic microcavity in transmission and photoluminescence. <i>Journal of Luminescence</i> , 2001 , 94-95, 821-826	3.8	10
69	A Surface-Emitting Circular Grating Polymer Laser. <i>Advanced Materials</i> , 2001 , 13, 1161-1164	24	69
68	Hampered excimer formation in a perylene derivative with bulky functional groups. <i>Chemical Physics Letters</i> , 2001 , 341, 213-218	2.5	13
67	Observation of strong excitonphoton coupling in an organic microcavity. <i>Chemical Physics Letters</i> , 2001 , 344, 352-356	2.5	41
66	Optical and electroemission properties of thin films of supermolecular anthracene-based rotaxanes. <i>Applied Surface Science</i> , 2001 , 175-176, 369-373	6.7	7
65	CONTROL OF THE ENERGY TRANSFER WITH THE OPTICAL MICROCAVITY. <i>International Journal of Modern Physics B</i> , 2001 , 15, 3704-3708	1.1	4

64	Charge-induced dephasing in thin polythiophene films. <i>Physical Review B</i> , 2001 , 64,	3.3	3
63	Time-resolved stimulated emission in an β -sexithienyl thin film. <i>Synthetic Metals</i> , 2001 , 116, 49-51	3.6	
62	Photophysical properties of thin films and solid phase of switchable supermolecular anthracene-based rotaxanes. <i>Synthetic Metals</i> , 2001 , 122, 63-65	3.6	4
61	Conjugated polymers: lasing and stimulated emission. <i>Current Opinion in Solid State and Materials Science</i> , 2001 , 5, 143-154	12	185
60	Observation of Phonon Resonances in the Optical Nonlinearity in an β -sexithienyl Thin Film. <i>Physica Status Solidi (B): Basic Research</i> , 2000 , 221, 561-565	1.3	
59	Polarized photoluminescence and spectral narrowing in an oriented polyfluorene thin film. <i>ChemPhysChem</i> , 2000 , 1, 142-6	3.2	15
58	Femtosecond differential transmission spectroscopy of β -sexithienyl thin film. <i>Journal of Luminescence</i> , 2000 , 87-89, 736-738	3.8	3
57	Femtosecond Differential Transmission Spectroscopy of β -sexithienyl Single Crystals at Low Temperature. <i>Journal of Physical Chemistry B</i> , 2000 , 104, 12210-12214	3.4	3
56	Femtosecond Differential Transmission Spectroscopy of β -sexithienyl Thin Film at Low Temperature. <i>Journal of Physical Chemistry B</i> , 2000 , 104, 6536-6540	3.4	4
55	Spontaneous and stimulated emission from a ladder-type conjugated polymer. <i>Physical Review B</i> , 1999 , 59, 4112-4118	3.3	27
54	The dynamics of gain-narrowing in a ladder-type β -conjugated polymer. <i>Chemical Physics Letters</i> , 1999 , 312, 376-384	2.5	27
53	Relaxation dynamics of excitons in thin quaterthiophene films on different substrates. <i>Chemical Physics Letters</i> , 1999 , 314, 9-15	2.5	21
52	Two-photon fluorescence and femtosecond two-photon absorption studies of MeLPPP, a ladder-type poly(phenylene) with low intra-chain disorder. <i>Chemical Physics Letters</i> , 1999 , 313, 755-762	2.5	21
51	Conjugated polymer lasers: emission characteristics and gain mechanism. <i>Physical Chemistry Chemical Physics</i> , 1999 , 1, 1795-1800	3.6	9
50	Enhanced Dipole-Dipole Interaction in a Polymer Microcavity. <i>Physical Review Letters</i> , 1999 , 82, 4118-4121	7.4	71
49	Femtosecond Transient Absorption Spectroscopy in β -sexithienyl thin films. <i>Synthetic Metals</i> , 1999 , 101, 555-556	3.6	1
48	The effect of intermolecular interaction on the electronic properties of quaterylene. <i>Synthetic Metals</i> , 1999 , 102, 1589-1590	3.6	
47	Electro-optical studies of a soluble conjugated polymer with particularly low intrachain disorder. <i>Physical Review B</i> , 1999 , 60, 8650-8658	3.3	52

46	Excitation dynamics in Hexithiophene single crystals and UHV-grown films. <i>Journal of Luminescence</i> , 1998 , 76-77, 416-419	3.8	6
45	A Tunable Blue-Green Laser from a Solid Conjugated Polymer. <i>Physica Status Solidi (B): Basic Research</i> , 1998 , 206, 437-441	1.3	5
44	Electric field-induced fluorescence quenching and transient fluorescence studies in poly(p-terphenylene vinylene) related polymers. <i>Chemical Physics</i> , 1998 , 227, 167-178	2.3	36
43	Disorder influenced optical properties of Hexithiophene single crystals and thin evaporated films. <i>Chemical Physics</i> , 1998 , 227, 49-56	2.3	52
42	Quaterrylenebis(dicarboximide)s: near infrared absorbing and emitting dyes. <i>Journal of Materials Chemistry</i> , 1998 , 8, 2357-2369		118
41	The Origin of Photoluminescence from Hexithienyl Thin Films. <i>Journal of Physical Chemistry B</i> , 1998 , 102, 7563-7567	3.4	29
40	Organic heteromultilayers: electronic structure of sexithienyl/ thin films grown in ultra-high vacuum. <i>Journal of Optics</i> , 1998 , 7, 151-157		1
39	The optical gain mechanism in solid conjugated polymers. <i>Applied Physics Letters</i> , 1998 , 72, 2933-2935	3.4	40
38	Laser emission from a solid conjugated polymer: Gain, tunability, and coherence. <i>Physical Review B</i> , 1998 , 57, R4218-R4221	3.3	37
37	Blue-green laser emission from a solid conjugated polymer. <i>Solid State Communications</i> , 1997 , 104, 759-762		13
36	Optical characterization of tris-(stilbene)amine and application in microcavities. <i>Synthetic Metals</i> , 1996 , 76, 117-119	3.6	1
35	Energy transfer in molecularly doped conjugated polymers. <i>Synthetic Metals</i> , 1996 , 78, 289-293	3.6	39
34	Field-induced dissociation of optical excitations in conjugated polymers. <i>Journal of Non-Crystalline Solids</i> , 1996 , 198-200, 661-664	3.9	4
33	Microresonator effects in optically and electrically pumped thin-film light-emitting diodes. <i>Synthetic Metals</i> , 1996 , 83, 257-260	3.6	6
32	Monte Carlo study of picosecond exciton relaxation and dissociation in poly(phenylenevinylene). <i>Physical Review B</i> , 1996 , 54, 5536-5544	3.3	95
31	Dynamics of optical excitations in a ladder-type pi -conjugated polymer containing aggregate states. <i>Physical Review B</i> , 1996 , 54, 1759-1765	3.3	89
30	Microcavity effects in a spin-coated polymer two-layer system. <i>Applied Physics Letters</i> , 1995 , 66, 1301-1304	3.4	83
29	Field-induced exciton breaking in conjugated polymers. <i>Physical Review B</i> , 1995 , 52, 4932-4940	3.3	75

28	Majority carrier injection from ITO anodes into organic light-emitting diodes based upon polymer blends. <i>Synthetic Metals</i> , 1995 , 68, 263-268	3.6	65
27	Excitation dynamics in conjugated polymers. <i>Pure and Applied Chemistry</i> , 1995 , 67, 377-385	2.1	28
26	A blue light emitting polymer with phenylenevinylene segments in the side-chains. <i>Advanced Materials</i> , 1995 , 7, 388-390	24	35
25	Efficient two layer leds on a polymer blend basis. <i>Advanced Materials</i> , 1995 , 7, 551-554	24	1400
24	Aggregate fluorescence in conjugated polymers. <i>Chemical Physics Letters</i> , 1995 , 240, 373-378	2.5	364
23	Observation of interface excitons and energy transfer processes in an oligo-thiophene multi-layer structure. <i>Chemical Physics Letters</i> , 1995 , 242, 207-211	2.5	13
22	Femtosecond dynamics of stimulated emission and photoinduced absorption in a PPP-type ladder polymer. <i>Chemical Physics Letters</i> , 1995 , 244, 171-176	2.5	68
21	Dynamics of excitation transfer in dye doped conjugated polymers. <i>Chemical Physics Letters</i> , 1995 , 245, 534-538	2.5	26
20	Spectroscopy of Conjugated Polymers. <i>Zeitschrift Fur Physikalische Chemie</i> , 1994 , 184, 233-252	3.1	17
19	Dynamics of singlet excitations in conjugated polymers: Poly(phenylenevinylene) and poly(phenylphenylenevinylene). <i>Physical Review B</i> , 1994 , 50, 10769-10779	3.3	88
18	Time resolved luminescence spectroscopy of conjugated polymers. <i>Journal of Luminescence</i> , 1994 , 60-61, 479-481	3.8	3
17	Ultrafast field-induced dissociation of excitons in conjugated polymers. <i>Physical Review Letters</i> , 1994 , 73, 1440-1443	7.4	292
16	Electroluminescence from polymer blends and molecularly doped polymers. <i>Synthetic Metals</i> , 1994 , 64, 141-145	3.6	69
15	Control of the Emission Properties of Conjugated Polymers: Trapping and Microcavity Effects. <i>Molecular Crystals and Liquid Crystals</i> , 1994 , 256, 335-342		18
14	Ultrafast Fluorescence Spectroscopy of PPV. <i>Molecular Crystals and Liquid Crystals</i> , 1994 , 256, 9-16		5
13	Femtosecond energy relaxation in pi -conjugated polymers. <i>Physical Review Letters</i> , 1993 , 70, 3820-3823	7.4	388
12	Conformational effects in poly(p-phenylene vinylene)s revealed by low-temperature site-selective fluorescence. <i>Journal of Physics Condensed Matter</i> , 1993 , 5, 247-260	1.8	170
11	Time resolved luminescence study of recombination processes in electroluminescent polymers. <i>Applied Physics Letters</i> , 1993 , 62, 2827-2829	3.4	101

10	Picosecond hopping relaxation in conjugated polymers. <i>Chemical Physics Letters</i> , 1993 , 209, 243-246	2.5	57
9	Time-resolved studies of two-photon absorption processes in poly(p-phenylenevinylene)s. <i>Chemical Physics Letters</i> , 1993 , 203, 28-32	2.5	25
8	Electroluminescence from phenylenevinylene-based polymer blends. <i>Advanced Materials for Optics and Electronics</i> , 1993 , 2, 197-204		42
7	Spectroscopic assessment of the role of disorder and polaron formation on electronic transport in molecularly doped polymers. <i>Chemical Physics Letters</i> , 1992 , 192, 576-580	2.5	7
6	Exciton versus band description of the absorption, luminescence and electro-absorption of poly(phenylphenylenevinylene) and poly(dodecylthiophene). <i>Synthetic Metals</i> , 1992 , 49, 341-352	3.6	47
5	Progress towards processible materials for light-emitting devices using poly(p-phenylphenylenevinylene). <i>Advanced Materials</i> , 1992 , 4, 661-662	24	86
4	Site-selection spectroscopy of poly(di-n-butylgermylene) (PDBG). <i>Chemical Physics Letters</i> , 1991 , 177, 389-393	2.5	4
3	Site-selective fluorescence studies on polysilylenes. <i>Chemical Physics</i> , 1991 , 150, 81-91	2.3	52
2	Light and heavy excitonic polarons in conjugated polymers. <i>Synthetic Metals</i> , 1991 , 45, 107-117	3.6	34
1	Vibronic hole burning in acene-doped MTHF glasses. <i>Chemical Physics Letters</i> , 1990 , 165, 125-130	2.5	1