

# Hubert J Krenner

## List of Publications by Year in descending order

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Version: 2024-02-01

93  
papers

2,720  
citations

201575

27  
h-index

189801

50  
g-index

97  
all docs

97  
docs citations

97  
times ranked

2804  
citing authors

#	ARTICLE	IF	CITATIONS
1	Photon scattering from a quantum acoustically modulated two-level system. AVS Quantum Science, 2022, 4, .	1.8	3
2	Handy nanoquakes. Nature Materials, 2022, 21, 499-501.	13.3	1
3	Optomechanical wave mixing by a single quantum dot. Optica, 2021, 8, 291.	4.8	24
4	Ultrafast electron cycloids driven by the transverse spin of a surface acoustic wave. Science Advances, 2021, 7, .	4.7	14
5	Resonance-fluorescence spectral dynamics of an acoustically modulated quantum dot. Physical Review Research, 2021, 3, .	1.3	12
6	High-Dimensional Acousto-optoelectric Correlation Spectroscopy Reveals Coupled Carrier Dynamics in Polytypic Nanowires. Physical Review Applied, 2021, 16, .	1.5	3
7	Sub-nanosecond acousto-electric carrier redistribution dynamics and transport in polytypic GaAs nanowires. Nanotechnology, 2021, 32, .	1.3	3
8	Quantum Dot Optomechanics in Suspended Nanophononic Strings. Advanced Quantum Technologies, 2020, 3, 1900102.	1.8	20
9	A hybrid (Al)GaAs-LiNbO <sub>3</sub> surface acoustic wave resonator for cavity quantum dot optomechanics. Applied Physics Letters, 2020, 117, .	1.5	18
10	Near-infrared saturable and reverse saturable absorption of ion beam synthesized VO <sub>2</sub> nanocrystals. Optical Materials Express, 2020, 10, 1630.	1.6	2
11	Integrated quantum dot optomechanics. , 2020, , .		0
12	The 2019 surface acoustic waves roadmap. Journal Physics D: Applied Physics, 2019, 52, 353001.	1.3	236
13	Real-Time Electron and Hole Transport Dynamics in Halide Perovskite Nanowires. Nano Letters, 2019, 19, 8701-8707.	4.5	14
14	A frequency-tunable nanomembrane mechanical oscillator with embedded quantum dots. Applied Physics Letters, 2019, 115, .	1.5	6
15	Integration of Single Quantum Dots in Suspended Phononic Waveguides. , 2019, , .		0
16	Breakdown of Corner States and Carrier Localization by Monolayer Fluctuations in Radial Nanowire Quantum Wells. Nano Letters, 2019, 19, 3336-3343.	4.5	14
17	Multiharmonic Frequency-Chirped Transducers for Surface-Acoustic-Wave Optomechanics. Physical Review Applied, 2018, 9, .	1.5	22
18	Interfacing quantum emitters with propagating surface acoustic waves. Journal Physics D: Applied Physics, 2018, 51, 373001.	1.3	41

#	ARTICLE	IF	CITATIONS
19	Recent progress on the scalable fabrication of hybrid polymer/SiO <sub>2</sub> nanophotonic cavity arrays with an encapsulated MoS <sub>2</sub> film. , 2018, , .		0
20	Combined electrical transport and capacitance spectroscopy of a MoS <sub>2</sub> -LiNbO <sub>3</sub> field effect transistor. Applied Physics Letters, 2017, 110, .	1.5	14
21	Multi-harmonic quantum dot optomechanics in fused LiNbO <sub>3</sub> -(Al)GaAs hybrids. Journal Physics D: Applied Physics, 2017, 50, 43LT01.	1.3	27
22	Scalable and Transfer-Free Fabrication of MoS <sub>2</sub> /SiO <sub>2</sub> Hybrid Nanophotonic Cavity Arrays with Quality Factors Exceeding 4000. Scientific Reports, 2017, 7, 7251.	1.6	10
23	Large-area grown MoS <sub>2</sub> and its integration in geometrically tunable photonic crystal cavities. , 2017, , .		0
24	Thermochromic modulation of surface plasmon polaritons in vanadium dioxide nanocomposites. Optics Express, 2016, 24, 17321.	1.7	19
25	Surface acoustic wave regulated single photon emission from a coupled quantum dot nanocavity system. Applied Physics Letters, 2016, 109, .	1.5	33
26	The Native Material Limit of Electron and Hole Mobilities in Semiconductor Nanowires. ACS Nano, 2016, 10, 4942-4953.	7.3	26
27	Coulomb Mediated Hybridization of Excitons in Coupled Quantum Dots. Physical Review Letters, 2016, 116, 077401.	2.9	25
28	Alloy Fluctuations Act as Quantum Dot-like Emitters in GaAs-AlGaAs Core-Shell Nanowires. ACS Nano, 2015, 9, 8335-8343.	7.3	65
29	Independent dynamic acousto-mechanical and electrostatic control of individual quantum dots in a LiNbO <sub>3</sub> -GaAs hybrid. Applied Physics Letters, 2015, 106, .	1.5	23
30	Fourier synthesis of radiofrequency nanomechanical pulses with different shapes. Nature Nanotechnology, 2015, 10, 512-516.	15.6	65
31	Scalable fabrication of a hybrid field-effect and acousto-electric device by direct growth of monolayer MoS <sub>2</sub> /LiNbO <sub>3</sub> . Nature Communications, 2015, 6, 8593.	5.8	91
32	Dynamic acousto-optic control of a strongly coupled photonic molecule. Nature Communications, 2015, 6, 8540.	5.8	50
33	Ultrafast Photodetection in the Quantum Wells of Single AlGaAs/GaAs-Based Nanowires. Nano Letters, 2015, 15, 6869-6874.	4.5	35
34	Optical Preparation of Stable Supercooled VO <sub>2</sub> Nanocrystals: A Route Towards Reconfigurable Photonic Devices for Telecom Wavelengths. , 2014, , .		0
35	Radio frequency occupancy state control of a single nanowire quantum dot. Journal Physics D: Applied Physics, 2014, 47, 394011.	1.3	22
36	Active Plasmonics with Surface Acoustic Waves: Dynamic Electro-Mechanical Control over a Surface Plasmon Polariton Launcher. , 2014, , .		0

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37	Collective Lipid Bilayer Dynamics Excited by Surface Acoustic Waves. <i>Physical Review Letters</i> , 2014, 113, 118102.	2.9	16
38	Optically imprinted reconfigurable photonic elements in a VO <sub>2</sub> nanocomposite. <i>Applied Physics Letters</i> , 2014, 105, .	1.5	25
39	Ultrasonically assisted deposition of colloidal crystals. <i>Applied Physics Letters</i> , 2014, 105, 031113.	1.5	7
40	Entanglement creation in a quantum-dot nanocavity system by Fourier-synthesized acoustic pulses. <i>Physical Review A</i> , 2014, 89, .	1.0	36
41	Site-Selective Ion Beam Synthesis and Optical Properties of Individual CdSe Nanocrystal Quantum Dots in a SiO <sub>2</sub> Matrix. <i>ACS Applied Materials &amp; Interfaces</i> , 2014, 6, 1339-1344.	4.0	7
42	Radio Frequency Electromechanical Control over a Surface Plasmon Polariton Coupler. <i>ACS Photonics</i> , 2014, 1, 91-95.	3.2	12
43	Dynamic Acoustic Control of Individual Optically Active Quantum Dot-like Emission Centers in Heterostructure Nanowires. <i>Nano Letters</i> , 2014, 14, 2256-2264.	4.5	64
44	Time-resolved coherent X-ray diffraction imaging of surface acoustic waves. <i>Journal of Applied Crystallography</i> , 2014, 47, 1596-1605.	1.9	12
45	Quantification of energy losses in organic solar cells from temperature-dependent device characteristics. <i>Physical Review B</i> , 2013, 88, .	1.1	62
46	Controlling exciton decay dynamics in semiconducting single-walled carbon nanotubes by surface acoustic waves. <i>Chemical Physics</i> , 2013, 413, 39-44.	0.9	4
47	Acoustically regulated carrier injection into a single optically active quantum dot. <i>Physical Review B</i> , 2013, 88, .	1.1	41
48	Probing ultrafast carrier tunneling dynamics in individual quantum dots and molecules. <i>Annalen Der Physik</i> , 2013, 525, 49-58.	0.9	15
49	Acousto-mechanical tuning of photonic crystal nanocavity modes. , 2013, , .		0
50	Surface acoustic wave-driven carrier dynamics as a contact-less probe for mobilities of photogenerated carriers in undoped nanowires. , 2013, , .		0
51	Time domain investigation of radio frequency acousto-mechanical tuning of photonic crystal nanocavity modes. , 2013, , .		0
52	Nanothermochromic diffraction gratings with giant switching contrast based on the metal-insulator transition of vanadium dioxide. <i>Proceedings of SPIE</i> , 2013, , .	0.8	0
53	Standing surface acoustic waves in LiNbO <sub>3</sub> studied by time resolved X-ray diffraction at Petra III. <i>AIP Advances</i> , 2013, 3, 072127.	0.6	12
54	Ion beam synthesis of nanothermochromic diffraction gratings with giant switching contrast at telecom wavelengths. <i>Applied Physics Letters</i> , 2012, 100, .	1.5	13

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55	Probing ultrafast charge and spin dynamics in a quantum dot molecule. , 2012, , .		0
56	Surface acoustic wave mediated carrier injection into individual quantum post nano emitters. Nanotechnology, 2012, 23, 285201.	1.3	13
57	Surface acoustic wave controlled charge dynamics in a thin InGaAs quantum well. JETP Letters, 2012, 95, 575-580.	0.4	16
58	Surface acoustic wave controlled carrier injection into self-assembled quantum dots and quantum posts. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 407-410.	0.8	1
59	Electrical Control of Interdot Electron Tunneling in a Double InGaAs Quantum-Dot Nanostructure. Physical Review Letters, 2012, 108, 197402.	2.9	78
60	High-fidelity optical preparation and coherent Larmor precession of a single hole in an (In,Ga)As quantum dot molecule. Physical Review B, 2012, 85, .	1.1	36
61	Directional and Dynamic Modulation of the Optical Emission of an Individual GaAs Nanowire Using Surface Acoustic Waves. Nano Letters, 2011, 11, 1512-1517.	4.5	56
62	Dynamic modulation of photonic crystal nanocavities using gigahertz acoustic phonons. Nature Photonics, 2011, 5, 605-609.	15.6	140
63	Direct observation of dynamic surface acoustic wave controlled carrier injection into single quantum posts using phase-resolved optical spectroscopy. Applied Physics Letters, 2011, 98, .	1.5	26
64	Quantitative excited state spectroscopy of a single InGaAs quantum dot molecule through multi-million-atom electronic structure calculations. Nanotechnology, 2011, 22, 315709.	1.3	28
65	Electrical control of the excitonâ€“biexciton splitting in self-assembled InGaAs quantum dots. Nanotechnology, 2011, 22, 325202.	1.3	23
66	Excited state quantum couplings and optical switching of an artificial molecule. Physical Review B, 2011, 84, .	1.1	17
67	Recent progress towards acoustically mediated carrier injection into individual nanostructures for single photon generation. Proceedings of SPIE, 2010, , .	0.8	1
68	High-frequency tuning of photonic crystal defect cavity modes using surface acoustic waves. Proceedings of SPIE, 2010, , .	0.8	0
69	Noninvasive probing of persistent conductivity in high quality ZnCdSe/ZnSe quantum wells using surface acoustic waves. Journal of Applied Physics, 2010, 107, 093717.	1.1	12
70	Surface acoustic wave mediated coupling of free-space radiation into surface plasmon polaritons on plain metal films. Physical Review B, 2010, 82, .	1.1	27
71	Enhanced Sequential Carrier Capture into Individual Quantum Dots and Quantum Posts Controlled by Surface Acoustic Waves. Nano Letters, 2010, 10, 3399-3407.	4.5	48
72	Cascaded exciton emission of an individual strain-induced quantum dot. Applied Physics Letters, 2009, 95, 083122.	1.5	7

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73	Quantum posts with tailored structural, electronic and optical properties for optoelectronic and quantum electronic device applications. Solid State Communications, 2009, 149, 1386-1394.	0.9	12
74	Growth and optical properties of self-assembled InGaAs quantum posts. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 1785-1789.	1.3	15
75	A Semiconductor Exciton Memory Cell Based on a Single Quantum Nanostructure. Nano Letters, 2008, 8, 1750-1755.	4.5	45
76	Growth, Structural, and Optical Properties of Self-Assembled (In,Ga)As Quantum Posts on GaAs. Nano Letters, 2007, 7, 802-806.	4.5	72
77	Optical Properties of Quantum Dots and Quantum Posts. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	0
78	Direct observation of acoustic phonon mediated relaxation between coupled exciton states in a single quantum dot molecule. Physical Review B, 2006, 74, .	1.1	41
79	Optically Probing Spin and Charge Interactions in a Tunable Artificial Molecule. Physical Review Letters, 2006, 97, 076403.	2.9	104
80	Nonlinear optical microscopy of a single self-assembled InGaAs quantum dot. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 4009-4012.	0.8	0
81	Nonequilibrium carrier dynamics in self-assembled InGaAs quantum dots. Physica Status Solidi (B): Basic Research, 2006, 243, 2217-2223.	0.7	2
82	Vertical quantum wire realized with double cleaved-edge overgrowth. Applied Physics Letters, 2006, 89, 032102.	1.5	2
83	Nonlinear optical response of a single self-assembled InGaAs quantum dot: A femtojoule pump-probe experiment. Applied Physics Letters, 2006, 88, 203110.	1.5	16
84	Nonlinear Optical Microscopy of a Single Self-assembled InGaAs Quantum Dot. , 2006, , .		0
85	Picosecond Spin-Preserving Carrier Capture in InGaAs/GaAs Quantum Dots. , 2006, , 41-44.		0
86	Investigation of cavity modes and direct observation of Purcell enhancement in 2D photonic crystal defect microcavities. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 26, 351-355.	1.3	10
87	Manipulation of the spontaneous emission dynamics of quantum dots in two-dimensional photonic crystals. Physical Review B, 2005, 71, .	1.1	129
88	Direct Observation of Controlled Coupling in an Individual Quantum Dot Molecule. Physical Review Letters, 2005, 94, 057402.	2.9	339
89	Recent advances in exciton-based quantum information processing in quantum dot nanostructures. New Journal of Physics, 2005, 7, 184-184.	1.2	87
90	Spin-preserving ultrafast carrier capture and relaxation in InGaAs quantum dots. Applied Physics Letters, 2005, 87, 153113.	1.5	23

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91	Probing Charge and Spin Excitations in Quantum Dots and Molecules. , 2005, , .		0
92	Physics and applications of self-assembled quantum dots. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 2131-2159.	0.8	6
93	Two-color Femtosecond Spectroscopy of Blue-Shifted InAs/AlGaAs Quantum Dots. Physica Status Solidi (B): Basic Research, 2002, 233, 401-407.	0.7	7