# P James Schuck

List of Publications by Year
in descending order

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|---|---|---|---|
| 60<br>papers | 4,533<br>citations | 147726<br>31<br>h-index | 138417<br>58<br>g-index |
| 60<br>all docs | 60<br>docs citations | 60<br>times ranked | 6040<br>citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Non-blinking and photostable upconverted luminescence from single lanthanide-doped nanocrystals. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 10917-10921. | 3.3 | 626 |
| 2 | Engineering bright sub-10-nm upconverting nanocrystals for single-molecule imaging. Nature Nanotechnology, 2014, 9, 300-305. | 15.6 | 499 |
| 3 | Controlled Synthesis and Single-Particle Imaging of Bright, Sub-10 nm Lanthanide-Doped Upconverting Nanocrystals. ACS Nano, 2012, 6, 2686-2692. | 7.3 | 296 |
| 4 | Visualizing nanoscale excitonic relaxation properties of disordered edges and grain boundaries in monolayer molybdenum disulfide. Nature Communications, 2015, 6, 7993. | 5.8 | 204 |
| 5 | Enrichment of molecular antenna triplets amplifies upconverting nanoparticle emission. Nature Photonics, 2018, 12, 402-407. | 15.6 | 200 |
| 6 | Continuous-wave upconverting nanoparticle microlasers. Nature Nanotechnology, 2018, 13, 572-577. | 15.6 | 188 |
| 7 | Giant nonlinear optical responses from photon-avalanching nanoparticles. Nature, 2021, 589, 230-235. | 13.7 | 167 |
| 8 | Ultralow-threshold, continuous-wave upconverting lasing from subwavelength plasmons. Nature Materials, 2019, 18, 1172-1176. | 13.3 | 160 |
| 9 | Polariton panorama. Nanophotonics, 2020, 10, 549-577. | 2.9 | 155 |
| 10 | Future and challenges for hybrid upconversion nanosystems. Nature Photonics, 2019, 13, 828-838. | 15.6 | 145 |
| 11 | Imaging strain-localized excitons in nanoscale bubbles of monolayer WSe2 at room temperature. Nature Nanotechnology, 2020, 15, 854-860. | 15.6 | 134 |
| 12 | Energy-Looping Nanoparticles: Harnessing Excited-State Absorption for Deep-Tissue Imaging. ACS Nano, 2016, 10, 8423-8433. | 7.3 | 122 |
| 13 | Low irradiance multiphoton imaging with alloyed lanthanide nanocrystals. Nature Communications, 2018, 9, 3082. | 5.8 | 120 |
| 14 | Hyperspectral Nanoscale Imaging on Dielectric Substrates with Coaxial Optical Antenna Scan Probes.. Nano Letters, 2011, 11, 1201-1207. | 4.5 | 111 |
| 15 | Concentrating and Recycling Energy in Lanthanide Codopants for Efficient and Spectrally Pure Emission: The Case of NaYF<sub>4</sub>:Er<sup>3+</sup>/Tm<sup>3+</sup> Upconverting Nanocrystals. Journal of Physical Chemistry B, 2012, 116, 10561-10570. | 1.2 | 102 |
| 16 | Gold Nanocone Near-Field Scanning Optical Microscopy Probes. ACS Nano, 2011, 5, 2570-2579. | 7.3 | 82 |
| 17 | Apparent self-heating of individual upconverting nanoparticle thermometers. Nature Communications, 2018, 9, 4907. | 5.8 | 82 |
| 18 | Optically Discriminating Carrier-Induced Quasiparticle Band Gap and Exciton Energy Renormalization in Monolayer<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>MoS</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub></mml:mrow> Physical Review Letters, 2017, 119, 087401. | 2.9 | 74 |

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|---|---|---|---|
| 19 | Optical parametric amplification by monolayer transition metal dichalcogenides. Nature Photonics, 2021, 15, 6-10. | 15.6 | 74 |
| 20 | Enhanced tunable second harmonic generation from twistable interfaces and vertical superlattices in boron nitride homostructures. Science Advances, 2021, 7, . | 4.7 | 73 |
| 21 | Hot electrons go through the barrier. Nature Nanotechnology, 2013, 8, 799-800. | 15.6 | 68 |
| 22 | Programmable hyperbolic polaritons in van der Waals semiconductors. Science, 2021, 371, 617-620. | 6.0 | 58 |
| 23 | Energy Transfer Networks within Upconverting Nanoparticles Are Complex Systems with Collective, Robust, and History-Dependent Dynamics. Journal of Physical Chemistry C, 2019, 123, 2678-2689. | 1.5 | 57 |
| 24 | The ultrafast onset of exciton formation in 2D semiconductors. Nature Communications, 2020, 11, 5277. | 5.8 | 57 |
| 25 | On Optical Dipole Moment and Radiative Recombination Lifetime of Excitons in WSe<sub>2</sub>. Advanced Functional Materials, 2017, 27, 1601741. | 7.8 | 44 |
| 26 | Controlled Assembly of Upconverting Nanoparticles for Low-Threshold Microlasers and Their Imaging in Scattering Media. ACS Nano, 2020, 14, 1508-1519. | 7.3 | 44 |
| 27 | A single particle plasmon resonance study of 3D conical nanoantennas. Nanoscale, 2013, 5, 7861. | 2.8 | 43 |
| 28 | The important role of water in growth of monolayer transition metal dichalcogenides. 2D Materials, 2017, 4, 021024. | 2.0 | 43 |
| 29 | Continuous Wave Sum Frequency Generation and Imaging of Monolayer and Heterobilayer Two-Dimensional Semiconductors. ACS Nano, 2020, 14, 708-714. | 7.3 | 41 |
| 30 | Nanoscale lattice dynamics in hexagonal boron nitride moirÃ© superlattices. Nature Communications, 2021, 12, 5741. | 5.8 | 34 |
| 31 | Chemical crystallography by serial femtosecond X-ray diffraction. Nature, 2022, 601, 360-365. | 13.7 | 33 |
| 32 | Anomalous Above-Gap Photoexcitations and Optical Signatures of Localized Charge Puddles in Monolayer Molybdenum Disulfide. ACS Nano, 2017, 11, 2115-2123. | 7.3 | 29 |
| 33 | Facile and quantitative estimation of strain in nanobubbles with arbitrary symmetry in 2D semiconductors verified using hyperspectral nano-optical imaging. Journal of Chemical Physics, 2020, 153, 024702. | 1.2 | 27 |
| 34 | Standardization of Methodology of Light-to-Heat Conversion Efficiency Determination for Colloidal Nanoheaters. ACS Applied Materials & Interfaces, 2021, 13, 44556-44567. | 4.0 | 27 |
| 35 | Far-field optical nanothermometry using individual sub-50 nm upconverting nanoparticles. Nanoscale, 2016, 8, 11611-11616. | 2.8 | 24 |
| 36 | Damage-Free Atomic Layer Etch of WSe<sub>2</sub>: A Platform for Fabricating Clean Two-Dimensional Devices. ACS Applied Materials & Interfaces, 2021, 13, 1930-1942. | 4.0 | 24 |

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|---|---|---|---|
| 37 | Deconvoluting the Photonic and Electronic Response of 2D Materials: The Case of MoS2. Scientific Reports, 2017, 7, 16938. | 1.6 | 23 |
| 38 | Nano-spectroscopy of excitons in atomically thin transition metal dichalcogenides. Nature Communications, 2022, 13, 542. | 5.8 | 23 |
| 39 | Strongly Quantum-Confined Blue-Emitting Excitons in Chemically Configurable Multiquantum Wells. ACS Nano, 2021, 15, 4085-4092. | 7.3 | 21 |
| 40 | Dry Transfer of van der Waals Crystals to Noble Metal Surfaces To Enable Characterization of Buried Interfaces. ACS Applied Materials & Interfaces, 2019, 11, 38218-38225. | 4.0 | 20 |
| 41 | Photostable and efficient upconverting nanocrystal-based chemical sensors. Optical Materials, 2018, 84, 345-353. | 1.7 | 19 |
| 42 | Anisotropic 2D excitons unveiled in organicâ€“inorganic quantum wells. Materials Horizons, 2021, 8, 197-208. | 6.4 | 17 |
| 43 | Upconverting nanoparticle micro-lightbulbs designed for deep tissue optical stimulation and imaging. Biomedical Optics Express, 2018, 9, 4359. | 1.5 | 16 |
| 44 | Light-Driven Permanent Charge Separation across a Hybrid Zero-Dimensional/Two-Dimensional Interface. Journal of Physical Chemistry C, 2020, 124, 8000-8007. | 1.5 | 14 |
| 45 | Manipulation of Exciton Dynamics in Single-Layer WSe<sub>2</sub> Using a Toroidal Dielectric Metasurface. Nano Letters, 2021, 21, 9930-9938. | 4.5 | 14 |
| 46 | Sizeâ€Dependent Photon Avalanching in Tm<sup>3+</sup> Doped LiYF<sub>4</sub> Nano, Micro, and Bulk Crystals. Advanced Optical Materials, 2022, 10, . | 3.6 | 13 |
| 47 | Metalloâ€Hydrogelâ€Assisted Synthesis and Direct Writing of Transition Metal Dichalcogenides. Advanced Functional Materials, 2019, 29, 1807612. | 7.8 | 12 |
| 48 | In-Plane Anisotropy in Biaxial ReS<sub>2</sub> Crystals Probed by Nano-Optical Imaging of Waveguide Modes. ACS Photonics, 2022, 9, 443-451. | 3.2 | 12 |
| 49 | Surface-Sensitive Photon Avalanche Behavior Revealed by Single-Avalanching-Nanoparticle Imaging. Journal of Physical Chemistry C, 2021, 125, 23976-23982. | 1.5 | 10 |
| 50 | 0D Nanocrystals as Lightâ€Driven, Localized Chargeâ€Injection Sources for the Contactless Manipulation of Atomically Thin 2D Materials. Advanced Photonics Research, 2021, 2, 2000151. | 1.7 | 9 |
| 51 | Nanoscale Optical Imaging of 2D Semiconductor Stacking Orders by Excitonâ€Enhanced Second Harmonic Generation. Advanced Optical Materials, 2022, 10, . | 3.6 | 9 |
| 52 | A polarizing situation: Taking an in-plane perspective for next-generation near-field studies. Frontiers of Physics, 2016, 11, 1. | 2.4 | 8 |
| 53 | Sub-20 nm laser ablation for lithographic dry development. Nanotechnology, 2012, 23, 185301. | 1.3 | 7 |
| 54 | Predicting the impact of temperature dependent multi-phonon relaxation processes on the photon avalanche behavior in Tm3+: NaYF4 nanoparticles. Optical Materials: X, 2021, 12, 100102. | 0.3 | 6 |

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|---|---|---|---|
| 55 | (INVITED) Infrared-to-ultraviolet upconverting nanoparticles for COVID-19-related disinfection applications. Optical Materials: X, 2021, 12, 100099. | 0.3 | 6 |
| 56 | Elucidating heterogeneity in nanoplasmonic structures using nonlinear photon localization microscopy. Journal of Optics (United Kingdom), 2014, 16, 114014. | 1.0 | 3 |
| 57 | Near-Field Imaging: Revealing Optical Properties of Reduced-Dimensionality Materials at Relevant Length Scales (Adv. Mater. 38/2015). Advanced Materials, 2015, 27, 5692-5692. | 11.1 | 2 |
| 58 | Selectively accessing the hotspots of optical nanoantennas by self-aligned dry laser ablation. Nanoscale, 2020, 12, 19170-19177. | 2.8 | 2 |
| 59 | Room-temperature continuous-wave upconverting micro- and nanolasing for bio-optofluidics. EPJ Web of Conferences, 2020, 238, 07005. | 0.1 | 0 |
| 60 | Near-field nanoscopy of excitons and ultrafast interlayer dynamics in van der Waals crystals. , 2022, , . | | 0 |