

# Boris Rybtchinski

## List of Publications by Year in descending order

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72  
papers

5,140  
citations

117625

34  
h-index

85541

71  
g-index

82  
all docs

82  
docs citations

82  
times ranked

7647  
citing authors

#	ARTICLE	IF	CITATIONS
1	Supramolecular Polymers in Aqueous Media. <i>Chemical Reviews</i> , 2016, 116, 2414-2477.	47.7	625
2	Adaptive Supramolecular Nanomaterials Based on Strong Noncovalent Interactions. <i>ACS Nano</i> , 2011, 5, 6791-6818.	14.6	413
3	Crystallization of Methyl Ammonium Lead Halide Perovskites: Implications for Photovoltaic Applications. <i>Journal of the American Chemical Society</i> , 2014, 136, 13249-13256.	13.7	388
4	Hybrid Organic-Inorganic Perovskites (HOIPs): Opportunities and Challenges. <i>Advanced Materials</i> , 2015, 27, 5102-5112.	21.0	372
5	Self-Assembly of Supramolecular Light-Harvesting Arrays from Covalent Multi-Chromophore Perylene-3,4:9,10-bis(dicarboximide) Building Blocks. <i>Journal of the American Chemical Society</i> , 2004, 126, 8284-8294.	13.7	281
6	A recyclable supramolecular membrane for size-selective separation of nanoparticles. <i>Nature Nanotechnology</i> , 2011, 6, 141-146.	31.5	212
7	Selective Bromination of Perylene Diimides under Mild Conditions. <i>Journal of Organic Chemistry</i> , 2007, 72, 5973-5979.	3.2	211
8	Supramolecular Gel Based on a Perylene Diimide Dye: Multiple Stimuli Responsiveness, Robustness, and Photofunction. <i>Journal of the American Chemical Society</i> , 2009, 131, 14365-14373.	13.7	205
9	Pathway-Dependent Self-Assembly of Perylene Diimide/Peptide Conjugates in Aqueous Medium. <i>Chemistry - A European Journal</i> , 2011, 17, 6068-6075.	3.3	171
10	Comparison of Steric and Electronic Requirements for C-C and C-H Bond Activation. Chelating vs Nonchelating Case. <i>Journal of the American Chemical Society</i> , 2001, 123, 9064-9077.	13.7	118
11	Unexpected Isomerization of acis- into attrans-Dihydride Complex. A Neutral Late Transition Metal Complex as a Hydride Donor. <i>Organometallics</i> , 1997, 16, 3786-3793.	2.3	112
12	Aromatic vs Aliphatic C-H Bond Activation by Rhodium(I) as a Function of Agostic Interactions: A Catalytic H/D Exchange between Olefins and Methanol or Water. <i>Journal of the American Chemical Society</i> , 2003, 125, 11041-11050.	13.7	111
13	Noncovalent Water-Based Materials: Robust yet Adaptive. <i>Chemistry - A European Journal</i> , 2011, 17, 9016-9026.	3.3	107
14	Control over Self-Assembly through Reversible Charging of the Aromatic Building Blocks in Photofunctional Supramolecular Fibers. <i>Journal of the American Chemical Society</i> , 2008, 130, 14966-14967.	13.7	105
15	Stable Aromatic Dianion in Water. <i>Journal of Physical Chemistry B</i> , 2008, 112, 8855-8858.	2.6	105
16	Crystallization of Organic Molecules: Nonclassical Mechanism Revealed by Direct Imaging. <i>ACS Central Science</i> , 2018, 4, 1031-1036.	11.3	88
17	Metal-Stabilized Methylene Arenium and $\sigma$ -Arenium Compounds: Synthesis, Structure, Reactivity, Charge Distribution, and Interconversion. <i>Organometallics</i> , 1999, 18, 895-905.	2.3	84
18	Economical Design in Noncovalent Nanoscale Synthesis: Diverse Photofunctional Nanostructures Based on a Single Covalent Building Block. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 926-930.	13.8	84

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19	Supramolecular Polymers in Aqueous Medium: Rational Design Based on Directional Hydrophobic Interactions. <i>Journal of the American Chemical Society</i> , 2011, 133, 16201-16211.	13.7	84
20	Hydrophobic Self-Assembly of a Perylenediimide-Linked DNA Dumbbell into Supramolecular Polymers. <i>Journal of the American Chemical Society</i> , 2010, 132, 15808-15813.	13.7	83
21	A mechanism of ferritin crystallization revealed by cryo-STEM tomography. <i>Nature</i> , 2020, 579, 540-543.	27.8	68
22	Understanding the Effect of Fluorocarbons in Aqueous Supramolecular Polymerization: Ultrastrong Noncovalent Binding and Cooperativity. <i>Journal of the American Chemical Society</i> , 2014, 136, 9443-9452.	13.7	67
23	Self-Assembled Organic Nanocrystals with Strong Nonlinear Optical Response. <i>Nano Letters</i> , 2015, 15, 7232-7237.	9.1	59
24	Self-Assembly of Light-Harvesting Crystalline Nanosheets in Aqueous Media. <i>ACS Nano</i> , 2013, 7, 3547-3556.	14.6	58
25	Noncovalent Aqua Materials Based on Perylene Diimides. <i>Accounts of Chemical Research</i> , 2019, 52, 2634-2646.	15.6	53
26	Thermodynamic Factors Impacting the Peptide-Driven Self-Assembly of Perylene Diimide Nanofibers. <i>Journal of Physical Chemistry B</i> , 2014, 118, 8642-8651.	2.6	50
27	On the Unexpected Stability of the Dianion of Perylene Diimide in Water—A Computational Study. <i>Journal of Physical Chemistry A</i> , 2011, 115, 2047-2056.	2.5	49
28	Hydrophobic Self-Assembly Affords Robust Noncovalent Polymer Isomers. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 4123-4126.	13.8	45
29	Mechanism of Crystalline Self-Assembly in Aqueous Medium: A Combined Cryo-TEM/Kinetic Study. <i>Chemistry - A European Journal</i> , 2014, 20, 10332-10342.	3.3	45
30	Controlled Self-Assembly of Photofunctional Supramolecular Nanotubes. <i>ACS Nano</i> , 2018, 12, 317-326.	14.6	40
31	Supramolecular Polymer Transformation: A Kinetic Study. <i>Journal of Physical Chemistry B</i> , 2014, 118, 12068-12073.	2.6	38
32	Dispersing Perylene Diimide/SWCNT Hybrids: Structural Insights at the Molecular Level and Fabricating Advanced Materials. <i>Journal of the American Chemical Society</i> , 2015, 137, 7429-7440.	13.7	37
33	Photoinduced Singlet Charge Transfer in a Ruthenium(II) Perylene-3,4:9,10-bis(dicarboximide) Complex. <i>Journal of Physical Chemistry B</i> , 2011, 115, 7533-7540.	2.6	36
34	Singlet fission in self-assembled PDI nanocrystals. <i>Nanoscale</i> , 2018, 10, 20147-20154.	5.6	36
35	Precrystalline Aggregates Enable Control over Organic Crystallization in Solution. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 179-182.	13.8	35
36	Noncovalent self-assembly in aqueous medium: Mechanistic insights from time-resolved cryogenic electron microscopy. <i>Current Opinion in Colloid and Interface Science</i> , 2012, 17, 330-342.	7.4	34

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37	Robust Aqua Material: A Pressure-Resistant Self-Assembled Membrane for Water Purification. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 2203-2207.	13.8	27
38	Free-Standing Nanocrystalline Materials Assembled from Small Molecules. <i>Journal of the American Chemical Society</i> , 2018, 140, 4761-4764.	13.7	24
39	Dual Function Metal-Organic Assemblies for Electrochromic-Hybrid Supercapacitors. <i>Advanced Materials Interfaces</i> , 2020, 7, 2000718.	3.7	23
40	Self-Assembled Hybrid Materials Based on Organic Nanocrystals and Carbon Nanotubes. <i>Advanced Materials</i> , 2018, 30, 1705027.	21.0	22
41	Thiophene-modified perylene diimide as hole transporting material in hybrid lead bromide perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2015, 3, 20305-20312.	10.3	21
42	Separation, Immobilization, and Biocatalytic Utilization of Proteins by a Supramolecular Membrane. <i>PLoS ONE</i> , 2013, 8, e63188.	2.5	19
43	C-C versus C-H Bond Oxidative Addition in PCX (X=P,N,O) Ligand Systems: Facility, Mechanism, and Control. <i>ACS Symposium Series</i> , 2004, , 70-85.	0.5	17
44	In situ NMR reveals real-time nanocrystal growth evolution via monomer-attachment or particle-coalescence. <i>Nature Communications</i> , 2021, 12, 229.	12.8	17
45	Continuum Crystallization Model Derived from Pharmaceutical Crystallization Mechanisms. <i>ACS Central Science</i> , 2021, 7, 900-908.	11.3	17
46	Recyclable electrochemical supercapacitors based on carbon nanotubes and organic nanocrystals. <i>Nanoscale</i> , 2020, 12, 8909-8914.	5.6	16
47	Hydrophobicity Control in Adaptive Crystalline Assemblies. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 8871-8874.	13.8	14
48	Hybrid organic nanocrystal/carbon nanotube film electrodes for air- and photo-stable perovskite photovoltaics. <i>Nanoscale</i> , 2019, 11, 3733-3740.	5.6	14
49	Bending Nanofibers into Nanospirals: Coordination Chemistry as a Tool for Shaping Hydrophobic Assemblies. <i>Chemistry - A European Journal</i> , 2015, 21, 166-176.	3.3	13
50	Self-Assembled two-dimensional porous network in aqueous solution based on perylene diimide phenylacetylene oligomer. <i>Polymers for Advanced Technologies</i> , 2011, 22, 133-138.	3.2	12
51	Enantiopure Laterally Functionalized Allenic Acetylenic Macrocycles: Synthesis, Chiroptical Properties, and Self-Assembly in Aqueous Media. <i>Chemistry - A European Journal</i> , 2014, 20, 16070-16073.	3.3	12
52	Self-Assembly of Perylene diimide-Single-Strand-DNA Conjugates: Employing Hydrophobic Interactions and DNA Base-Pairing To Create a Diverse Structural Space. <i>Chemistry - A European Journal</i> , 2017, 23, 10328-10337.	3.3	12
53	Organic phototransistors based on perylene diimide nanocrystals lacking $\pi$ - $\pi$ interactions. <i>Journal of Materials Chemistry C</i> , 2018, 6, 10597-10602.	5.5	12
54	Crystallization of Small Organic Molecules in a Polymer Matrix: Multistep Mechanism Enables Structural Control. <i>Small</i> , 2019, 15, 1902936.	10.0	9

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55	The Kinetics of Growth of Metallo-supramolecular Polyelectrolytes in Solution. <i>Chemistry - A European Journal</i> , 2018, 24, 2898-2912.	3.3	8
56	Modular Molecular Nanoplastics. <i>ACS Nano</i> , 2019, 13, 11097-11106.	14.6	8
57	Interface Modification by Simple Organic Salts Improves Performance of Planar Perovskite Solar Cells. <i>Advanced Materials Interfaces</i> , 2016, 3, 1600506.	3.7	6
58	Aqueous Supramolecular Polymers Based on Aromatic Amphiphiles: Rational Design, Complexity, and Functional Materials. <i>Advances in Polymer Science</i> , 2013, , 363-387.	0.8	4
59	Real-space Crystal Structure Analysis by Low-Dose Focal-Series TEM Imaging of Organic Materials with Near-Atomic Resolution. <i>Advanced Materials</i> , 2022, 34, e2202088.	21.0	4
60	Thermal Response of DNA Supramolecular Polymers Assembled with Hydrophobic Sticky Ends. <i>Journal of Physical Chemistry B</i> , 2013, 117, 14649-14654.	2.6	3
61	In Situ Growth of High Quality Crystals for Organic Electronics. <i>ACS Applied Electronic Materials</i> , 2020, 2, 790-795.	4.3	3
62	Control over size, shape, and photonics of self-assembled organic nanocrystals. <i>Beilstein Journal of Organic Chemistry</i> , 2021, 17, 42-51.	2.2	3
63	Robuste -Aqua-Materialien- eine druckstabile, selbstorganisierte Membran zur Wasserreinigung. <i>Angewandte Chemie</i> , 2017, 129, 2237-2242.	2.0	2
64	A Nanoscopic View of Photoinduced Charge Transfer in Organic Nanocrystalline Heterojunctions. <i>Journal of Physical Chemistry C</i> , 2019, 123, 25031-25041.	3.1	2
65	Cation-Ligand Complexation Mediates the Temporal Evolution of Colloidal Fluoride Nanocrystals through Transient Aggregation. <i>Nano Letters</i> , 2021, 21, 9916-9921.	9.1	2
66	Artificial photosynthesis for solar energy conversion. , 0, , 349-364.		1
67	From the Mechanism to the Device in Polymer-Assisted Rubrene Crystallization. <i>Crystal Growth and Design</i> , 2021, 21, 4064-4072.	3.0	1
68	Adsorption-Inhibition of Clathrate Hydrates by Self-Assembled Nanostructures. <i>ChemPhysChem</i> , 2021, 22, 2182-2189.	2.1	1
69	Functional supramolecular nanomaterials: robust yet adaptive. <i>Proceedings of SPIE</i> , 2013, , .	0.8	0
70	Supramolecular Nanofibers Self-Assembled from Foldamers: Structure Control through Preassembly. <i>Israel Journal of Chemistry</i> , 2014, 54, 748-758.	2.3	0
71	Hydrophobicity Control in Adaptive Crystalline Assemblies. <i>Angewandte Chemie</i> , 2018, 130, 9009-9012.	2.0	0
72	Composites of hydrophilic polymers and organic nanocrystals enable enhanced robustness. <i>Polymers for Advanced Technologies</i> , 2019, 30, 2549-2557.	3.2	0