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	Realâ€Space Crystal Structure Analysis by Lowâ€Dose Focalâ€Series TEM Imaging of Organic Materials with Nearâ€Atomic Resolution. Advanced Materials, 2022, 34, e2202088.	21.0	4
2	Control over size, shape, and photonics of self-assembled organic nanocrystals. Beilstein Journal of Organic Chemistry, 2021, 17, 42-51.	2.2	3
3	In situ NMR reveals real-time nanocrystal growth evolution via monomer-attachment or particle-coalescence. Nature Communications, 2021, 12, 229.	12.8	17
4	Continuum Crystallization Model Derived from Pharmaceutical Crystallization Mechanisms. ACS Central Science, 2021, 7, 900-908.	11.3	17
5	From the Mechanism to the Device in Polymer-Assisted Rubrene Crystallization. Crystal Growth and Design, 2021, 21, 4064-4072.	3.0	1
6	Adsorptionâ€Inhibition of Clathrate Hydrates by Selfâ€Assembled Nanostructures. ChemPhysChem, 2021, 22, 2182-2189.	2.1	1
7	Cation-Ligand Complexation Mediates the Temporal Evolution of Colloidal Fluoride Nanocrystals through Transient Aggregation. Nano Letters, 2021, 21, 9916-9921.	9.1	2
8	Dual Function Metalloâ€“Organic Assemblies for Electrochromicâ€“Hybrid Supercapacitors. Advanced Materials Interfaces, 2020, 7, 2000718.	3.7	23
9	A mechanism of ferritin crystallization revealed by cryo-STEM tomography. Nature, 2020, 579, 540-543.	27.8	68
10	Recyclable electrochemical supercapacitors based on carbon nanotubes and organic nanocrystals. Nanoscale, 2020, 12, 8909-8914.	5.6	16
11	In Situ Growth of High Quality Crystals for Organic Electronics. ACS Applied Electronic Materials, 2020, 2, 790-795.	4.3	3
12	Modular Molecular Nanoplastics. ACS Nano, 2019, 13, 11097-11106.	14.6	8
13	Composites of hydrophilic polymers and organic nanocrystals enable enhanced robustness. Polymers for Advanced Technologies, 2019, 30, 2549-2557.	3.2	0
14	Crystallization of Small Organic Molecules in a Polymer Matrix: Multistep Mechanism Enables Structural Control. Small, 2019, 15, 1902936.	10.0	9
15	Noncovalent Aqua Materials Based on Perylene Diimides. Accounts of Chemical Research, 2019, 52, 2634-2646.	15.6	53
16	A Nanoscopic View of Photoinduced Charge Transfer in Organic Nanocrystalline Heterojunctions. Journal of Physical Chemistry C, 2019, 123, 25031-25041.	3.1	2
17	Hybrid organic nanocrystal/carbon nanotube film electrodes for air- and photo-stable perovskite photovoltaics. Nanoscale, 2019, 11, 3733-3740.	5.6	14
18	Controlled Self-Assembly of Photofunctional Supramolecular Nanotubes. ACS Nano, 2018, 12, 317-326.	14.6	40

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19	Free-Standing Nanocrystalline Materials Assembled from Small Molecules. Journal of the American Chemical Society, 2018, 140, 4761-4764.	13.7	24
20	The Kinetics of Growth of Metalloâ€supramolecular Polyelectrolytes in Solution. Chemistry - A European Journal, 2018, 24, 2898-2912.	3.3	8
21	Selfâ€Assembled Hybrid Materials Based on Organic Nanocrystals and Carbon Nanotubes. Advanced Materials, 2018, 30, 1705027.	21.0	22
22	Organic phototransistors based on perylene diimide nanocrystals lacking Ï€â€“Ï€ interactions. Journal of Materials Chemistry C, 2018, 6, 10597-10602.	5.5	12
23	Singlet fission in self-assembled PDI nanocrystals. Nanoscale, 2018, 10, 20147-20154.	5.6	36
24	Hydrophobicity Control in Adaptive Crystalline Assemblies. Angewandte Chemie - International Edition, 2018, 57, 8871-8874.	13.8	14
25	Crystallization of Organic Molecules: Nonclassical Mechanism Revealed by Direct Imaging. ACS Central Science, 2018, 4, 1031-1036.	11.3	88
26	Hydrophobicity Control in Adaptive Crystalline Assemblies. Angewandte Chemie, 2018, 130, 9009-9012.	2.0	0
27	Robust Aqua Material: A Pressureâ€Resistant Selfâ€Assembled Membrane for Water Purification. Angewandte Chemie - International Edition, 2017, 56, 2203-2207.	13.8	27
28	Robuste â€œAquaâ€Materialienâ€: eine druckstabile, selbstorganisierte Membran zur Wasserreinigung. Angewandte Chemie, 2017, 129, 2237-2242.	2.0	2
29	Selfâ€Assembly of Perylenediimideâ€“Singleâ€Strandâ€DNA Conjugates: Employing Hydrophobic Interactions and DNA Baseâ€Pairing To Create a Diverse Structural Space. Chemistry - A European Journal, 2017, 23, 10328-10337.	3.3	12
30	Precrystalline Aggregates Enable Control over Organic Crystallization in Solution. Angewandte Chemie - International Edition, 2016, 55, 179-182.	13.8	35
31	Interface Modification by Simple Organic Salts Improves Performance of Planar Perovskite Solar Cells. Advanced Materials Interfaces, 2016, 3, 1600506.	3.7	6
32	Supramolecular Polymers in Aqueous Media. Chemical Reviews, 2016, 116, 2414-2477.	47.7	625
33	Hybrid Organicâ€“Inorganic Perovskites (HOIPs): Opportunities and Challenges. Advanced Materials, 2015, 27, 5102-5112.	21.0	372
34	Dispersing Perylene Diimide/SWCNT Hybrids: Structural Insights at the Molecular Level and Fabricating Advanced Materials. Journal of the American Chemical Society, 2015, 137, 7429-7440.	13.7	37
35	Self-Assembled Organic Nanocrystals with Strong Nonlinear Optical Response. Nano Letters, 2015, 15, 7232-7237.	9.1	59
36	Thiophene-modified perylenediimide as hole transporting material in hybrid lead bromide perovskite solar cells. Journal of Materials Chemistry A, 2015, 3, 20305-20312.	10.3	21

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37	Bending Nanofibers into Nanospirals: Coordination Chemistry as a Tool for Shaping Hydrophobic Assemblies. Chemistry - A European Journal, 2015, 21, 166-176.	3.3	13
38	Enantiopure Laterally Functionalized Allenoâ€“Acetylenic Macrocycles: Synthesis, Chiroptical Properties, and Selfâ€Assembly in Aqueous Media. Chemistry - A European Journal, 2014, 20, 16070-16073.	3.3	12
39	Hydrophobic Selfâ€Assembly Affords Robust Noncovalent Polymer Isomers. Angewandte Chemie - International Edition, 2014, 53, 4123-4126.	13.8	45
40	Mechanism of Crystalline Selfâ€Assembly in Aqueous Medium: A Combined Cryoâ€TEM/Kinetic Study. Chemistry - A European Journal, 2014, 20, 10332-10342.	3.3	45
41	Supramolecular Nanofibers Selfâ€Assembled from Foldamers: Structure Control through Preassembly. Israel Journal of Chemistry, 2014, 54, 748-758.	2.3	0
42	Supramolecular Polymer Transformation: A Kinetic Study. Journal of Physical Chemistry B, 2014, 118, 12068-12073.	2.6	38
43	Crystallization of Methyl Ammonium Lead Halide Perovskites: Implications for Photovoltaic Applications. Journal of the American Chemical Society, 2014, 136, 13249-13256.	13.7	388
44	Thermodynamic Factors Impacting the Peptide-Driven Self-Assembly of Perylene Diimide Nanofibers. Journal of Physical Chemistry B, 2014, 118, 8642-8651.	2.6	50
45	Understanding the Effect of Fluorocarbons in Aqueous Supramolecular Polymerization: Ultrastrong Noncovalent Binding and Cooperativity. Journal of the American Chemical Society, 2014, 136, 9443-9452.	13.7	67
46	Self-Assembly of Light-Harvesting Crystalline Nanosheets in Aqueous Media. ACS Nano, 2013, 7, 3547-3556.	14.6	58
47	Thermal Response of DNA Supramolecular Polymers Assembled with Hydrophobic Sticky Ends. Journal of Physical Chemistry B, 2013, 117, 14649-14654.	2.6	3
48	Functional supramolecular nanomaterials: robust yet adaptive. Proceedings of SPIE, 2013, , .	0.8	0
49	Aqueous Supramolecular Polymers Based on Aromatic Amphiphiles: Rational Design, Complexity, and Functional Materials. Advances in Polymer Science, 2013, , 363-387.	0.8	4
50	Separation, Immobilization, and Biocatalytic Utilization of Proteins by a Supramolecular Membrane. PLoS ONE, 2013, 8, e63188.	2.5	19
51	Noncovalent self-assembly in aqueous medium: Mechanistic insights from time-resolved cryogenic electron microscopy. Current Opinion in Colloid and Interface Science, 2012, 17, 330-342.	7.4	34
52	On the Unexpected Stability of the Dianion of Perylene Diimide in Waterâ€"A Computational Study. Journal of Physical Chemistry A, 2011, 115, 2047-2056.	2.5	49
53	Supramolecular Polymers in Aqueous Medium: Rational Design Based on Directional Hydrophobic Interactions. Journal of the American Chemical Society, 2011, 133, 16201-16211.	13.7	84
54	Photoinduced Singlet Charge Transfer in a Ruthenium(II) Perylene-3,4:9,10-bis(dicarboximide) Complex. Journal of Physical Chemistry B, 2011, 115, 7533-7540.	2.6	36

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55	A recyclable supramolecular membrane for size-selective separation of nanoparticles. Nature Nanotechnology, 2011, 6, 141-146.	31.5	212
56	Adaptive Supramolecular Nanomaterials Based on Strong Noncovalent Interactions. ACS Nano, 2011, 5, 6791-6818.	14.6	413
57	Selfâ€assembled twoâ€dimensional porous network in aqueous solution based on perylene diimide phenylacetylene oligomer. Polymers for Advanced Technologies, 2011, 22, 133-138.	3.2	12
58	Pathwayâ€Dependent Selfâ€Assembly of Perylene Diimide/Peptide Conjugates in Aqueous Medium. Chemistry - A European Journal, 2011, 17, 6068-6075.	3.3	171
59	Noncovalent Waterâ€Based Materials: Robust yet Adaptive. Chemistry - A European Journal, 2011, 17, 9016-9026.	3.3	107
60	Hydrophobic Self-Assembly of a Perylenediimide-Linked DNA Dumbbell into Supramolecular Polymers. Journal of the American Chemical Society, 2010, 132, 15808-15813.	13.7	83
61	Economical Design in Noncovalent Nanoscale Synthesis: Diverse Photofunctional Nanostructures Based on a Single Covalent Building Block. Angewandte Chemie - International Edition, 2009, 48, 926-930.	13.8	84
62	Supramolecular Gel Based on a Perylene Diimide Dye: Multiple Stimuli Responsiveness, Robustness, and Photofunction. Journal of the American Chemical Society, 2009, 131, 14365-14373.	13.7	205
63	Control over Self-Assembly through Reversible Charging of the Aromatic Building Blocks in Photofunctional Supramolecular Fibers. Journal of the American Chemical Society, 2008, 130, 14966-14967.	13.7	105
64	Stable Aromatic Dianion in Water. Journal of Physical Chemistry B, 2008, 112, 8855-8858.	2.6	105
65	Selective Bromination of Perylene Diimides under Mild Conditions. Journal of Organic Chemistry, 2007, 72, 5973-5979.	3.2	211
66	Self-Assembly of Supramolecular Light-Harvesting Arrays from Covalent Multi-Chromophore Perylene-3,4:9,10-bis(dicarboximide) Building Blocks. Journal of the American Chemical Society, 2004, 126, 8284-8294.	13.7	281
67	Câ€”C versus Câ€”H Bond Oxidative Addition in PCX (X=P,N,O) Ligand Systems: Facility, Mechanism, and Control. ACS Symposium Series, 2004, , 70-85.	0.5	17
68	Aromatic vs Aliphatic Câˆ’H Bond Activation by Rhodium(I) as a Function of Agostic Interactions:Â Catalytic H/D Exchange between Olefins and Methanol or Water. Journal of the American Chemical Society, 2003, 125, 11041-11050.	13.7	111
69	Comparison of Steric and Electronic Requirements for Câˆ’C and Câˆ’H Bond Activation. Chelating vs Nonchelating Case. Journal of the American Chemical Society, 2001, 123, 9064-9077.	13.7	118
70	Metal-Stabilized Methylene Arenium and Ïƒ-Arenium Compounds:â€‰ Synthesis, Structure, Reactivity, Charge Distribution, and Interconversion. Organometallics, 1999, 18, 895-905.	2.3	84
71	Unexpected Isomerization of acis- into atrans-Dihydride Complex. A Neutral Late Transition Metal Complex as a Hydride Donor. Organometallics, 1997, 16, 3786-3793.	2.3	112
72	Artificial photosynthesis for solar energy conversion. , 0, , 349-364.		1