James J De Yoreo

List of Publications by Year
in descending order

81 papers	8,947 citations	94433 37 h-index	66911 78 g-index
95 all docs	95 docs citations	95 times ranked	9559 citing authors

#	Article	IF	Citations
1	In situ imaging of amorphous intermediates during brucite carbonation in supercritical CO2. Nature Materials, 2022, 21, 345-351.	27.5	18
2	Spiers Memorial Lecture: Assembly-based pathways of crystallization. Faraday Discussions, 2022, 235, 9-35.	3.2	10
3	Frontispiece: Peptoidâ€Directed Formation of Fiveâ€Fold Twinned Au Nanostars through Particle Attachment and Facet Stabilization. Angewandte Chemie - International Edition, 2022, 61, .	13.8	1
4	Peptoidâ€Directed Formation of Fiveâ€Fold Twinned Au Nanostars through Particle Attachment and Facet Stabilization. Angewandte Chemie, 2022, 134, .	2.0	2
5	Particle-based hematite crystallization is invariant to initial particle morphology. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2112679119.	7.1	9
6	Peptoidâ€Directed Formation of Fiveâ€Fold Twinned Au Nanostars through Particle Attachment and Facet Stabilization. Angewandte Chemie - International Edition, 2022, 61, .	13.8	5
7	Frontispiz: Peptoidâ€Directed Formation of Fiveâ€Fold Twinned Au Nanostars through Particle Attachment and Facet Stabilization. Angewandte Chemie, 2022, 134, .	2.0	0
8	Rotational dynamics and transition mechanisms of surface-adsorbed proteins. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2020242119.	7.1	6
9	Impact of Nanoparticle Size and Surface Chemistry on Peptoid Self-Assembly. ACS Nano, 2022, 16, 8095-8106.	14.6	9
10	Amyloid-like amelogenin nanoribbons template mineralization via a low-energy interface of ion binding sites. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2106965119.	7.1	19
11	Engineering Biomolecular Selfâ€Assembly at Solidâ€"Liquid Interfaces. Advanced Materials, 2021, 33, e1905784.	21.0	25
12	Quantifying the Dynamics of Protein Self-Organization Using Deep Learning Analysis of Atomic Force Microscopy Data. Nano Letters, 2021, 21, 158-165.	9.1	17
13	Design of biologically active binary protein 2D materials. Nature, 2021, 589, 468-473.	27.8	85
14	Self-similar mesocrystals form via interface-driven nucleation and assembly. Nature, 2021, 590, 416-422.	27.8	98
15	Highly Bright and Photostable Two-Dimensional Nanomaterials Assembled from Sequence-Defined Peptoids. , 2021, 3, 420-427.		16
16	Disentangling Rotational Dynamics and Ordering Transitions in a System of Self-Organizing Protein Nanorods <i>via</i> Rotationally Invariant Latent Representations. ACS Nano, 2021, 15, 6471-6480.	14.6	19
17	Programmable two-dimensional nanocrystals assembled from POSS-containing peptoids as efficient artificial light-harvesting systems. Science Advances, 2021, 7, .	10.3	20
18	Ion-dependent proteinâ€"surface interactions from intrinsic solvent response. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	10

#	ARTICLE	IF	CITATIONS
19	Early-Stage Aggregation and Crystalline Interactions of Peptoid Nanomembranes. Journal of Physical Chemistry Letters, 2021, 12, 6126-6133.	4.6	14
20	Phase Transformation Mechanism of Amorphous Calcium Phosphate to Hydroxyapatite Investigated by Liquid-Cell Transmission Electron Microscopy. Crystal Growth and Design, 2021, 21, 5126-5134.	3.0	29
21	Peptoid-directed assembly of CdSe nanoparticles. Nanoscale, 2021, 13, 1273-1282.	5.6	18
22	Moving beyond the Solvent-Tip Approximation to Determine Site-Specific Variations of Interfacial Water Structure through 3D Force Microscopy. Journal of Physical Chemistry C, 2021, 125, 1282-1291.	3.1	31
23	Organothiol Monolayer Formation Directly on Muscovite Mica. Angewandte Chemie, 2020, 132, 2343-2347.	2.0	1
24	Organothiol Monolayer Formation Directly on Muscovite Mica. Angewandte Chemie - International Edition, 2020, 59, 2323-2327.	13.8	4
25	Assembly of a patchy protein into variable 2D lattices via tunable multiscale interactions. Nature Communications, 2020, 11, 3770.	12.8	31
26	Role of the Solventâ€“Surfactant Duality of Ionic Liquids in Directing Two-Dimensional Particle Assembly. Journal of Physical Chemistry C, 2020, 124, 24215-24222.	3.1	8
27	What atoms do when they get together. Nature Chemistry, 2020, 12, 883-885.	13.6	2
28	Connecting energetics to dynamics in particle growth by oriented attachment using real-time observations. Nature Communications, 2020, 11, 1045.	12.8	74
29	A Mechanistic Understanding of Nonclassical Crystal Growth in Hydrothermally Synthesized Sodium Yttrium Fluoride Nanowires. Chemistry of Materials, 2020, 32, 2753-2763.	6.7	27
30	Effect of Hydrophilicity and Interfacial Water Structure on Particle Attachment. Journal of Physical Chemistry C, 2020, 124, 5480-5488.	3.1	18
31	Sequenceâ€“Structureâ€“Binding Relationships Reveal Adhesion Behavior of the Car9 Solid-Binding Peptide: An Integrated Experimental and Simulation Study. Journal of the American Chemical Society, 2020, 142, 2355-2363.	13.7	21
32	Shape-preserving amorphous-to-crystalline transformation of CaCO ₃ revealed by in situ TEM. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 3397-3404.	7.1	97
33	Controlling protein assembly on inorganic crystals through designed protein interfaces. Nature, 2019, 571, 251-256.	27.8	85
34	Hierarchical Assembly of Peptoidâ€Based Cylindrical Micelles Exhibiting Efficient Resonance Energy Transfer in Aqueous Solution. Angewandte Chemie - International Edition, 2019, 58, 12223-12230.	13.8	34
35	Hierarchical Assembly of Peptoidâ€Based Cylindrical Micelles Exhibiting Efficient Resonance Energy Transfer in Aqueous Solution. Angewandte Chemie, 2019, 131, 12351-12358.	2.0	1
36	Organicâ€“mineral interfacial chemistry drives heterogeneous nucleation of Sr-rich (Ba <sub> <i>x</i>) Tj ETQq0 0 0 rgBT /Overlock 10 T the National Academy of Sciences of the United States of America, 2019, 116, 13221-13226.	7.1	45

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37	Self-Assembling 2D Arrays with <i>de Novo</i> Protein Building Blocks. Journal of the American Chemical Society, 2019, 141, 8891-8895.	13.7	37
38	Monitoring solvent dynamics and ion associations in the formation of cubic octamer polyanion in tetramethylammonium silicate solutions. Physical Chemistry Chemical Physics, 2019, 21, 4717-4720.	2.8	9
39	Addressing some of the technical challenges associated with liquid phase S/TEM studies of particle nucleation, growth and assembly. Micron, 2019, 118, 35-42.	2.2	24
40	Growth of Au and ZnS nanostructures via engineered peptide and M13 bacteriophage templates. Soft Matter, 2018, 14, 2996-3002.	2.7	2
41	Supersaturated calcium carbonate solutions are classical. Science Advances, 2018, 4, eaao6283.	10.3	116
42	Nucleation and phase transformation pathways in electrolyte solutions investigated by in situ microscopy techniques. Current Opinion in Colloid and Interface Science, 2018, 34, 74-88.	7.4	19
43	<i>In Situ</i> TEM and AFM Investigation of Morphological Controls during the Growth of Single Crystal BaWO₄. Crystal Growth and Design, 2018, 18, 1367-1375.	3.0	20
44	De novo design of self-assembling helical protein filaments. Science, 2018, 362, 705-709.	12.6	112
45	Building two-dimensional materials one row at a time: Avoiding the nucleation barrier. Science, 2018, 362, 1135-1139.	12.6	155
46	Control of Calcium Phosphate Nucleation and Transformation through Interactions of Enamelin and Amelogenin Exhibits the â€œGoldilocks Effectâ€. Crystal Growth and Design, 2018, 18, 7391-7400.	3.0	29
47	Impact of Solution Chemistry and Particle Anisotropy on the Collective Dynamics of Oriented Aggregation. ACS Nano, 2018, 12, 10114-10122.	14.6	40
48	Controlled synthesis of highly-branched plasmonic gold nanoparticles through peptoid engineering. Nature Communications, 2018, 9, 2327.	12.8	74
49	Near surface nucleation and particle mediated growth of colloidal Au nanocrystals. Nanoscale, 2018, 10, 11907-11912.	5.6	48
50	Tuning crystallization pathways through sequence engineering of biomimetic polymers. Nature Materials, 2017, 16, 767-774.	27.5	116
51	Direction-specific van der Waals attraction between rutile TiO ₂ nanocrystals. Science, 2017, 356, 434-437.	12.6	103
52	A classical view on nonclassical nucleation. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E7882-E7890.	7.1	181
53	Trends in micaâ€“mica adhesion reflect the influence of molecular details on long-range dispersion forces underlying aggregation and coalignment. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 7537-7542.	7.1	56
54	The energetics of prenucleation clusters in lattice solutions. Journal of Chemical Physics, 2016, 145, 211921.	3.0	13

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55	Surface-Directed Assembly of Sequence-Defined Synthetic Polymers into Networks of Hexagonally Patterned Nanoribbons with Controlled Functionalities. ACS Nano, 2016, 10, 5314-5320.	14.6	57
56	A Microkinetic Model of Calcite Step Growth. Angewandte Chemie - International Edition, 2016, 55, 11086-11090.	13.8	24
57	Selfâ€Repair and Patterning of 2D Membraneâ€Like Peptoid Materials. Advanced Functional Materials, 2016, 26, 8960-8967.	14.9	50
58	Investigating materials formation with liquid-phase and cryogenic TEM. Nature Reviews Materials, 2016, 1, .	48.7	153
59	Sequence-Defined Energetic Shifts Control the Disassembly Kinetics and Microstructure of Amelogenin Adsorbed onto Hydroxyapatite (100). Langmuir, 2015, 31, 10451-10460.	3.5	24
60	Calcium carbonate nucleation driven by ion binding in a biomimetic matrix revealed by in situ electron microscopy. Nature Materials, 2015, 14, 394-399.	27.5	353
61	Crystallization by particle attachment in synthetic, biogenic, and geologic environments. Science, 2015, 349, aaa6760.	12.6	1,467
62	Investigating Processes of Nanocrystal Formation and Transformation via Liquid Cell TEM. Microscopy and Microanalysis, 2014, 20, 425-436.	0.4	94
63	A Unified Description of Attachment-Based Crystal Growth. ACS Nano, 2014, 8, 6526-6530.	14.6	121
64	In situ TEM imaging of CaCO ₃ nucleation reveals coexistence of direct and indirect pathways. Science, 2014, 345, 1158-1162.	12.6	584
65	Reconciling disparate views of template-directed nucleation through measurement of calcite nucleation kinetics and binding energies. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 1304-1309.	7.1	122
66	Tuning calcite morphology and growth acceleration by a rational design of highly stable protein-mimetics. Scientific Reports, 2014, 4, 6266.	3.3	65
67	Ion-association complexes unite classical and non-classical theories for the biomimetic nucleation of calcium phosphate. Nature Communications, 2013, 4, 1507.	12.8	602
68	Microscopic Evidence for Liquid-Liquid Separation in Supersaturated CaCO ₃ Solutions. Science, 2013, 341, 885-889.	12.6	433
69	Surface Selectivity of Calcite on Self-Assembled Monolayers. Journal of Physical Chemistry C, 2013, 117, 5154-5163.	3.1	14
70	Polysaccharide chemistry regulates kinetics of calcite nucleation through competition of interfacial energies. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 9261-9266.	7.1	173
71	Direct observation of kinetic traps associated with structural transformations leading to multiple pathways of S-layer assembly. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 12968-12973.	7.1	77
72	The thermodynamics of calcite nucleation at organic interfaces: Classical vs. non-classical pathways. Faraday Discussions, 2012, 159, 509.	3.2	189

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73	Direction-Specific Interactions Control Crystal Growth by Oriented Attachment. Science, 2012, 336, 1014-1018.	12.6	958
74	Engineered Biomimetic Polymers as Tunable Agents for Controlling CaCO₃ Mineralization. Journal of the American Chemical Society, 2011, 133, 5214-5217.	13.7	103
75	Self-catalyzed growth of S layers via an amorphous-to-crystalline transition limited by folding kinetics. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 16536-16541.	7.1	160
76	Scanning Probeâ€based Fabrication of 3D Nanostructures via Affinity Templates, Functional RNA, and Meniscusâ€mediated Surface Remodeling. Scanning, 2008, 30, 159-171.	1.5	15
77	Solvent-mediated repair and patterning of surfaces by AFM. Nanotechnology, 2008, 19, 105304.	2.6	20
78	Structural Development of Mercaptophenol Self-Assembled Monolayers and the Overlying Mineral Phase during Templated CaCO₃ Crystallization from a Transient Amorphous Film. Journal of the American Chemical Society, 2007, 129, 10370-10381.	13.7	89
79	Physical Controls on Directed Virus Assembly at Nanoscale Chemical Templates. Journal of the American Chemical Society, 2006, 128, 10801-10807.	13.7	47
80	Principles of Crystal Nucleation and Growth. Reviews in Mineralogy and Geochemistry, 2003, 54, 57-93.	4.8	883
81	Nonclassical Crystallization Pathways in Biomolecular Self-Assembly. ACS Symposium Series, 0, , 89-103.	0.5	0