Michael F Toney

List of Publications by Year in Descending Order

541 papers	49,812 citations	114 h-index	208 g-index
570 ext. papers	55,039 ext. citations	11 avg, IF	7.6 L-index

#	Paper	IF	Citations
541	Vapor deposition rate modifies anisotropic glassy structure of an anthracene-based organic semiconductor.. *Journal of Chemical Physics*, **2022**, 156, 014504	3.9	1
540	Increased crystallite size in thin films of C60 and p-terphenyls via PDMS-assisted crystallization. *Journal of Materials Chemistry C*, **2022**, 10, 5657-5665	7.1	
539	Phonons in Metal Halide Perovskites **2022**, 1-35		
538	Mixing Matters: Nanoscale Heterogeneity and Stability in Metal Halide Perovskite Solar Cells. *ACS Energy Letters*, **2022**, 7, 471-480	20.1	6
537	Beyond Local Solvation Structure: Nanometric Aggregates in Battery Electrolytes and Their Effect on Electrolyte Properties. *ACS Energy Letters*, **2022**, 7, 461-470	20.1	11
536	Why it is important to determine and report the impact of probe radiation. *Joule*, **2022**, 6, 723-725	27.8	1
535	Scattering techniques for mixed donor-acceptor characterization in organic photovoltaics. *Materials Horizons*, **2021**,	14.4	5
534	Using In Situ High-Energy X-ray Diffraction to Quantify Electrode Behavior of Li-Ion Batteries from Extreme Fast Charging. *ACS Applied Energy Materials*, **2021**, 4, 11590-11598	6.1	4
533	Surface equilibration mechanism controls the molecular packing of glassy molecular semiconductors at organic interfaces. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	3
532	Unraveling the Unconventional Order of a High-Mobility Indacenodithiophene-Benzothiadiazole Copolymer.. *ACS Macro Letters*, **2021**, 10, 1306-1314	6.6	2
531	Stable Glasses of Organic Semiconductor Resist Crystallization. *Journal of Physical Chemistry B*, **2021**, 125, 461-466	3.4	4
530	A Review of Existing and Emerging Methods for Lithium Detection and Characterization in Li-Ion and Li-Metal Batteries. *Advanced Energy Materials*, **2021**, 11, 2100372	21.8	41
529	Fictitious phase separation in Li layered oxides driven by electro-autocatalysis. *Nature Materials*, **2021**, 20, 991-999	27	27
528	Using Deposition Rate and Substrate Temperature to Manipulate Liquid Crystal-Like Order in a Vapor-Deposited Hexagonal Columnar Glass. *Journal of Physical Chemistry B*, **2021**, 125, 2761-2770	3.4	5
527	Water-in-Salt LiTFSI Aqueous Electrolytes. 1. Liquid Structure from Combined Molecular Dynamics Simulation and Experimental Studies. *Journal of Physical Chemistry B*, **2021**, 125, 4501-4513	3.4	16
526	Electrochemical ion insertion from the atomic to the device scale. *Nature Reviews Materials*, **2021**, 6, 847-867	73.3	19
525	Persistent and partially mobile oxygen vacancies in Li-rich layered oxides. *Nature Energy*, **2021**, 6, 642-652	72.3	24

524	Controlling Polymer Morphology in Blade-Coated All-Polymer Solar Cells. *Chemistry of Materials*, **2021**, 33, 5951-5961	9.6	5
523	The Role of Metal Substitution in Tuning Anion Redox in Sodium Metal Layered Oxides Revealed by X-Ray Spectroscopy and Theory. *Angewandte Chemie*, **2021**, 133, 10975-10982	3.6	7
522	The Role of Metal Substitution in Tuning Anion Redox in Sodium Metal Layered Oxides Revealed by X-Ray Spectroscopy and Theory. *Angewandte Chemie - International Edition*, **2021**, 60, 10880-10887	16.4	16
521	Crystallization in one-step solution deposition of perovskite films: Upward or downward?. *Science Advances*, **2021**, 7,	14.3	56
520	Coulombically-stabilized oxygen hole polarons enable fully reversible oxygen redox. *Energy and Environmental Science*, **2021**, 14, 4858-4867	35.4	6
519	Quantification of heterogeneous, irreversible lithium plating in extreme fast charging of lithium-ion batteries. *Energy and Environmental Science*, **2021**, 14, 4979-4988	35.4	16
518	Achieving High Thermoelectric Performance and Metallic Transport in Solvent-Sheared PEDOT:PSS. *Advanced Electronic Materials*, **2021**, 7, 2001190	6.4	13
517	In Situ Characterization of Ferroelectric HfO2 During Rapid Thermal Annealing. *Physica Status Solidi - Rapid Research Letters*, **2021**, 15, 2000598	2.5	4
516	Mechanism of Additive-Assisted Room-Temperature Processing of Metal Halide Perovskite Thin Films. *ACS Applied Materials & Interfaces*, **2021**, 13, 13212-13225	9.5	13
515	Orientation-Dependent Distortion of Lamellae in a Block Copolymer Electrolyte under DC Polarization. *Macromolecules*, **2021**, 54, 7808-7821	5.5	4
514	Quantification of Efficiency in Lithium Metal Negative Electrodes via Operando X-ray Diffraction. *Chemistry of Materials*, **2021**, 33, 7537-7545	9.6	4
513	Toward Unraveling the Origin of Lithium Fluoride in the Solid Electrolyte Interphase. *Chemistry of Materials*, **2021**, 33, 7315-7336	9.6	10
512	Kinetic origins of the metastable zone width in the manganese oxide Pourbaix diagram. *Journal of Materials Chemistry A*, **2021**, 9, 7857-7867	13	0
511	Bridging the thermodynamics and kinetics of temperature-induced morphology evolution in polymer/fullerene organic solar cell bulk heterojunction. *Materials Horizons*, **2021**, 8, 1272-1285	14.4	7
510	Alloying a single and a double perovskite: a Cu mixed-valence layered halide perovskite with strong optical absorption. *Chemical Science*, **2021**, 12, 8689-8697	9.4	10
509	Over What Length Scale Does an Inorganic Substrate Perturb the Structure of a Glassy Organic Semiconductor?. *ACS Applied Materials & Interfaces*, **2020**, 12, 26717-26726	9.5	9
508	Sulfur-Donor Solvents Strongly Coordinate Pb2+ in Hybrid Organic–Inorganic Perovskite Precursor Solutions. *Journal of Physical Chemistry C*, **2020**, 124, 14496-14502	3.8	21
507	Surface regulation enables high stability of single-crystal lithium-ion cathodes at high voltage. *Nature Communications*, **2020**, 11, 3050	17.4	97

506	Melting of Magnesium Borohydride under High Hydrogen Pressure: Thermodynamic Stability and Effects of Nanoconfinement. *Chemistry of Materials*, **2020**, 32, 5604-5615	9.6	9
505	GIWAXS-SIIRkit: scattering intensity, indexing and refraction calculation toolkit for grazing-incidence wide-angle X-ray scattering of organic materials. *Journal of Applied Crystallography*, **2020**, 53, 1108-1129	3.8	10
504	NASICON Na3V2(PO4)3 Enables Quasi-Two-Stage Na+ and Zn2+ Intercalation for Multivalent Zinc Batteries. *Chemistry of Materials*, **2020**, 32, 3028-3035	9.6	40
503	Using resonant energy X-ray diffraction to extract chemical order parameters in ternary semiconductors. *Journal of Materials Chemistry C*, **2020**, 8, 4350-4356	7.1	10
502	Synthesis of Poly(bisisoindigo) Using a Metal-Free Aldol Polymerization for Thin-Film Transistor Applications. *ACS Applied Materials & Interfaces*, **2020**, 12, 14265-14271	9.5	13
501	FAxCs1−xPbI3 Nanocrystals: Tuning Crystal Symmetry by A-Site Cation Composition. *ACS Energy Letters*, **2020**, 5, 2475-2482	20.1	14
500	Subsurface Cooling Rates and Microstructural Response during Laser Based Metal Additive Manufacturing. *Scientific Reports*, **2020**, 10, 1981	4.9	29
499	Toward quantifying capacity losses due to solid electrolyte interphase evolution in silicon thin film batteries. *Journal of Chemical Physics*, **2020**, 152, 084702	3.9	18
498	Molecular Orientation for Vapor-Deposited Organic Glasses Follows Rate-Temperature Superposition: The Case of Posaconazole. *Journal of Physical Chemistry B*, **2020**, 124, 2505-2513	3.4	11
497	Structural and spectral dynamics of single-crystalline Ruddlesden-Popper phase halide perovskite blue light-emitting diodes. *Science Advances*, **2020**, 6, eaay4045	14.3	53
496	Degradation mechanisms in mixed-cation and mixed-halide CsxFA1−xPb(BryI1−y)3 perovskite films under ambient conditions. *Journal of Materials Chemistry A*, **2020**, 8, 9302-9312	13	14
495	Hybrid Nanostructured Ni(OH)2/NiO for High-Capacity Lithium-Ion Battery Anodes. *Journal of Electrochemical Energy Conversion and Storage*, **2020**, 17,	2	2
494	Highly Reversible Plating/Stripping of Porous Zinc Anodes for Multivalent Zinc Batteries. *Journal of the Electrochemical Society*, **2020**, 167, 140520	3.9	5
493	X-Ray Studies of Energy Materials **2020**, 1803-1824		
492	Synthesis and Crystallization of Atomic Layer Deposition β-Eucryptite LiAlSiO Thin-Film Solid Electrolytes. *ACS Applied Materials & Interfaces*, **2020**, 12, 56935-56942	9.5	2
491	High-capacity thermochemical CO2 dissociation using iron-poor ferrites. *Energy and Environmental Science*, **2020**, 13, 592-600	35.4	12
490	Structural Origins of Light-Induced Phase Segregation in Organic-Inorganic Halide Perovskite Photovoltaic Materials. *Matter*, **2020**, 2, 207-219	12.7	77
489	Size-Dependent Lattice Structure and Confinement Properties in CsPbI3 Perovskite Nanocrystals: Negative Surface Energy for Stabilization. *ACS Energy Letters*, **2020**, 5, 238-247	20.1	95

488	Fine-Tuning Semiconducting Polymer Self-Aggregation and Crystallinity Enables Optimal Morphology and High-Performance Printed All-Polymer Solar Cells. *Journal of the American Chemical Society*, **2020**, 142, 392-406	16.4	98
487	Inducing Molecular Aggregation of Polymer Semiconductors in a Secondary Insulating Polymer Matrix to Enhance Charge Transport. *Chemistry of Materials*, **2020**, 32, 897-905	9.6	25
486	Impact of Processing on Structural and Compositional Evolution in Mixed Metal Halide Perovskites during Film Formation. *Advanced Functional Materials*, **2020**, 30, 2001752	15.6	22
485	Heterogeneous Behavior of Lithium Plating during Extreme Fast Charging. *Cell Reports Physical Science*, **2020**, 1, 100114	6.1	29
484	Cooling dynamics of two titanium alloys during laser powder bed fusion probed with in situ X-ray imaging and diffraction. *Materials and Design*, **2020**, 195, 108987	8.1	11
483	Test of the Dynamic-Domain and Critical Scattering Hypotheses in Cubic Methylammonium Lead Triiodide. *Physical Review Letters*, **2020**, 125,	7.4	7
482	Advanced Characterization in Clean Water Technologies. *Joule*, **2020**, 4, 1637-1659	27.8	13
481	Understanding additive controlled lithium morphology in lithium metal batteries. *Journal of Materials Chemistry A*, **2020**, 8, 16960-16972	13	12
480	Covalently Linked, Two-Dimensional Quantum Dot Assemblies. *Langmuir*, **2020**, 36, 9944-9951	4	1
479	Tuning Intra and Intermolecular Interactions for Balanced Hole and Electron Transport in Semiconducting Polymers. *Chemistry of Materials*, **2020**, 32, 7338-7346	9.6	12
478	Interfacial Speciation Determines Interfacial Chemistry: X-ray-Induced Lithium Fluoride Formation from Water-in-salt Electrolytes on Solid Surfaces. *Angewandte Chemie - International Edition*, **2020**, 59, 23180-23187	16.4	12
477	Interfacial Speciation Determines Interfacial Chemistry: X-ray-Induced Lithium Fluoride Formation from Water-in-salt Electrolytes on Solid Surfaces. *Angewandte Chemie*, **2020**, 132, 23380-23387	3.6	6
476	Preferred crystallographic orientation of cellulose in plant primary cell walls. *Nature Communications*, **2020**, 11, 4720	17.4	12
475	Time-Resolved Structural Kinetics of an Organic Mixed Ionic-Electronic Conductor. *Advanced Materials*, **2020**, 32, e2003404	24	25
474	High Power Energy Storage via Electrochemically Expanded and Hydrated Manganese-Rich Oxides. *Frontiers in Chemistry*, **2020**, 8, 715	5	1
473	Concentration and velocity profiles in a polymeric lithium-ion battery electrolyte. *Energy and Environmental Science*, **2020**, 13, 4312-4321	35.4	17
472	Emerging X-ray imaging technologies for energy materials. *Materials Today*, **2020**, 34, 132-147	21.8	38
471	Generic packing motifs in vapor-deposited glasses of organic semiconductors. *Soft Matter*, **2019**, 15, 7590-7595	3.6	11

470	Shedding X-ray Light on the Interfacial Electrochemistry of Silicon Anodes for Li-Ion Batteries. *Accounts of Chemical Research*, **2019**, 52, 2673-2683	24.3	13
469	Fullerene derivative induced morphology of bulk heterojunction blends: PIPCP:PCBM.. *RSC Advances*, **2019**, 9, 4106-4112	3.7	7
468	Metal-oxygen decoordination stabilizes anion redox in Li-rich oxides. *Nature Materials*, **2019**, 18, 256-265	27	178
467	Morphology of Organic Semiconductors Electrically Doped from Solution Using Phosphomolybdic Acid. *Chemistry of Materials*, **2019**, 31, 6677-6683	9.6	2
466	A map of the inorganic ternary metal nitrides. *Nature Materials*, **2019**, 18, 732-739	27	148
465	Augmenting n-Type Performance of Ambipolar Top-Contact Organic Thin-Film Transistors by Self-Generated Interlayers. *Chemistry of Materials*, **2019**, 31, 7046-7053	9.6	9
464	Vapor-Deposited Glass Structure Determined by Deposition Rate-Substrate Temperature Superposition Principle. *Journal of Physical Chemistry Letters*, **2019**, 10, 3536-3542	6.4	21
463	Multifunctional Optical Coatings and Light Management for Photovoltaics **2019**, 153-173		2
462	Ptychography of Organic Thin Films at Soft X-ray Energies. *Chemistry of Materials*, **2019**, 31, 4913-4918	9.6	5
461	Zn2SbN3: growth and characterization of a metastable photoactive semiconductor. *Materials Horizons*, **2019**, 6, 1669-1674	14.4	13
460	Dynamics of pore formation during laser powder bed fusion additive manufacturing. *Nature Communications*, **2019**, 10, 1987	17.4	223
459	Chemical Evolution of CoCrMo Wear Particles: An in Situ Characterization Study. *Journal of Physical Chemistry C*, **2019**, 123, 9894-9901	3.8	2
458	Polyimide-PEG Segmented Block Copolymer Membranes with High Proton Conductivity by Improving Bicontinuous Nanostructure of Ionic Liquid-Doped Films. *Macromolecular Chemistry and Physics*, **2019**, 220, 1900006	2.6	2
457	Organic thin-film microstructure characterization **2019**, 489-528		1
456	Designing a Quinone-Based Redox Mediator to Facilitate Li2S Oxidation in Li-S Batteries. *Joule*, **2019**, 3, 872-884	27.8	114
455	Pathways for practical high-energy long-cycling lithium metal batteries. *Nature Energy*, **2019**, 4, 180-186	62.3	1202
454	Laser-Induced Keyhole Defect Dynamics during Metal Additive Manufacturing. *Advanced Engineering Materials*, **2019**, 21, 1900455	3.5	23
453	Copper(I)-Based Highly Emissive All-Inorganic Rare-Earth Halide Clusters. *Matter*, **2019**, 1, 180-191	12.7	27

452	Synthesis of Polycrystalline Ruddlesden–Popper Organic Lead Halides and Their Growth Dynamics. *Chemistry of Materials*, **2019**, 31, 9472-9479	9.6	12
451	Advanced X-ray Scattering and Spectroscopy Characterization of an Antisoiling Coating for Solar Module Glass. *ACS Applied Energy Materials*, **2019**, 2, 7870-7878	6.1	5
450	Vapor deposition of a nonmesogen prepares highly structured organic glasses. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 21421-21426	11.5	20
449	Confined Interlayer Water Promotes Structural Stability for High-Rate Electrochemical Proton Intercalation in Tungsten Oxide Hydrates. *ACS Energy Letters*, **2019**, 4, 2805-2812	20.1	51
448	Effect of Extensional Flow on the Evaporative Assembly of a Donor–Acceptor Semiconducting Polymer. *ACS Applied Electronic Materials*, **2019**, 1, 2445-2454	4	1
447	X-Ray Studies of Energy Materials **2019**, 1-22		
446	Robust and Stretchable Polymer Semiconducting Networks: From Film Microstructure to Macroscopic Device Performance. *Chemistry of Materials*, **2019**, 31, 6530-6539	9.6	19
445	Acceptor Gradient Polymer Donors for Non-Fullerene Organic Solar Cells. *Chemistry of Materials*, **2019**, 31, 9729-9741	9.6	10
444	Analysis and Simulation of One-Dimensional Transport Models for Lithium Symmetric Cells. *Journal of the Electrochemical Society*, **2019**, 166, A3806-A3819	3.9	7
443	Tuning the bandgap of CsAgBiBr through dilute tin alloying. *Chemical Science*, **2019**, 10, 10620-10628	9.4	37
442	Origin of Anisotropic Molecular Packing in Vapor-Deposited Alq3 Glasses. *Journal of Physical Chemistry Letters*, **2019**, 10, 164-170	6.4	30
441	Hydrogen Purification in Palladium-Based Membranes: An Operando X-ray Diffraction Study. *Industrial & Engineering Chemistry Research*, **2019**, 58, 926-934	3.9	4
440	Higher Mobility and Carrier Lifetimes in Solution-Processable Small-Molecule Ternary Solar Cells with 11% Efficiency. *Advanced Energy Materials*, **2019**, 9, 1802836	21.8	52
439	Selective brookite polymorph formation related to the amorphous precursor state in TiO2 thin films. *Journal of Non-Crystalline Solids*, **2019**, 505, 109-114	3.9	8
438	Solid Electrolyte Interphase on Native Oxide-Terminated Silicon Anodes for Li-Ion Batteries. *Joule*, **2019**, 3, 762-781	27.8	109
437	Every Atom Counts: Elucidating the Fundamental Impact of Structural Change in Conjugated Polymers for Organic Photovoltaics. *Chemistry of Materials*, **2018**, 30, 2995-3009	9.6	33
436	Negative-pressure polymorphs made by heterostructural alloying. *Science Advances*, **2018**, 4, eaaq1442	14.3	25
435	Carrier Transport and Recombination in Efficient All-Small-Molecule Solar Cells with the Nonfullerene Acceptor IDTBR. *Advanced Energy Materials*, **2018**, 8, 1800264	21.8	52

434	Mixed Domains Enhance Charge Generation and Extraction in Bulk-Heterojunction Solar Cells with Small-Molecule Donors. *Advanced Energy Materials*, **2018**, 8, 1702941	21.8	34
433	Fluoroethylene Carbonate Induces Ordered Electrolyte Interface on Silicon and Sapphire Surfaces as Revealed by Sum Frequency Generation Vibrational Spectroscopy and X-ray Reflectivity. *Nano Letters*, **2018**, 18, 2105-2111	11.5	35
432	Graphene induced electrical percolation enables more efficient charge transport at a hybrid organic semiconductor/graphene interface. *Physical Chemistry Chemical Physics*, **2018**, 20, 4422-4428	3.6	12
431	The meniscus-guided deposition of semiconducting polymers. *Nature Communications*, **2018**, 9, 534	17.4	214
430	The nanoscale structure of the electrolyte–metal oxide interface. *Energy and Environmental Science*, **2018**, 11, 594-602	35.4	30
429	Absence of Mixed Phase in Organic Photovoltaic Active Layers Facilitates Use of Green Solvent Processing. *Journal of Physical Chemistry C*, **2018**, 122, 11136-11144	3.8	10
428	An instrument for in situ time-resolved X-ray imaging and diffraction of laser powder bed fusion additive manufacturing processes. *Review of Scientific Instruments*, **2018**, 89, 055101	1.7	91
427	Morphological, Chemical, and Electronic Changes of the Conjugated Polymer PTB7 with Thermal Annealing. *IScience*, **2018**, 2, 182-192	6.1	29
426	Controlling Thin-Film Stress and Wrinkling during Perovskite Film Formation. *ACS Energy Letters*, **2018**, 3, 1225-1232	20.1	108
425	Langmuir-Blodgett Thin Films of Diketopyrrolopyrrole-Based Amphiphiles. *ACS Applied Materials & Interfaces*, **2018**, 10, 11995-12004	9.5	13
424	Understanding the reactivity of CoCrMo-implant wear particles. *Npj Materials Degradation*, **2018**, 2,	5.7	7
423	Understanding the Impact of Oligomeric Polystyrene Side Chain Arrangement on the All-Polymer Solar Cell Performance. *Advanced Energy Materials*, **2018**, 8, 1701552	21.8	19
422	Triptycene as a Supramolecular Additive in PTB7:PCBM Blends and Its Influence on Photovoltaic Properties. *ACS Applied Materials & Interfaces*, **2018**, 10, 24665-24678	9.5	5
421	Tin–lead halide perovskites with improved thermal and air stability for efficient all-perovskite tandem solar cells. *Sustainable Energy and Fuels*, **2018**, 2, 2450-2459	5.8	127
420	Novel ALD Chemistry Enabled Low-Temperature Synthesis of Lithium Fluoride Coatings for Durable Lithium Anodes. *ACS Applied Materials & Interfaces*, **2018**, 10, 26972-26981	9.5	66
419	Theory-Guided Synthesis of a Metastable Lead-Free Piezoelectric Polymorph. *Advanced Materials*, **2018**, 30, e1800559	24	4
418	Understanding Chemomechanical Li-ion Cathode Degradation through Multi-Scale, Multi-Modal X-ray Spectromicroscopy. *Microscopy and Microanalysis*, **2018**, 24, 426-427	0.5	1
417	Transformation from crystalline precursor to perovskite in PbCl-derived MAPbI. *Nature Communications*, **2018**, 9, 3458	17.4	59

416	Solvent Additives: Key Morphology-Directing Agents for Solution-Processed Organic Solar Cells. *Advanced Materials*, **2018**, 30, e1707114	24	228
415	Humidity-Induced Photoluminescence Hysteresis in Variable Cs/Br Ratio Hybrid Perovskites. *Journal of Physical Chemistry Letters*, **2018**, 9, 3463-3469	6.4	35
414	The use of poly-cation oxides to lower the temperature of two-step thermochemical water splitting. *Energy and Environmental Science*, **2018**, 11, 2172-2178	35.4	65
413	Operando Spectromicroscopy of Sulfur Species in Lithium-Sulfur Batteries. *Journal of the Electrochemical Society*, **2018**, 165, A6043-A6050	3.9	18
412	Acoustic phonon lifetimes limit thermal transport in methylammonium lead iodide. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 11905-11910	11.5	52
411	Direct Observation of Structural Evolution of Metal Chalcogenide in Electrocatalytic Water Oxidation. *ACS Nano*, **2018**, 12, 12369-12379	16.7	220
410	Compositional engineering of tin-lead halide perovskites for efficient and stable low band gap solar cells **2018**,		4
409	Donor Conjugated Polymers with Polar Side Chain Groups: The Role of Dielectric Constant and Energetic Disorder on Photovoltaic Performance. *Advanced Functional Materials*, **2018**, 28, 1803418	15.6	26
408	Effect of Molecular Shape on the Properties of Non-Fullerene Acceptors: Contrasting Calamitic Versus 3D Design Principles. *ACS Applied Energy Materials*, **2018**, 1, 6513-6523	6.1	9
407	Impact of Surfaces on Photoinduced Halide Segregation in Mixed-Halide Perovskites. *ACS Energy Letters*, **2018**, 3, 2694-2700	20.1	117
406	Impact of Polymer Side Chain Modification on OPV Morphology and Performance. *Chemistry of Materials*, **2018**, 30, 7872-7884	9.6	32
405	Using X-ray Spectromicroscopy for Operando Characterization of Li-S Batteries. *Microscopy and Microanalysis*, **2018**, 24, 440-441	0.5	
404	Zinc Blende Magnesium Sulfide in Rechargeable Magnesium-Sulfur Batteries. *Chemistry of Materials* , **2018**, 30, 6318-6324	9.6	25
403	General Post-annealing Method Enables High-Efficiency Two-Dimensional Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2018**, 10, 33187-33197	9.5	52
402	Engineering Stress in Perovskite Solar Cells to Improve Stability. *Advanced Energy Materials*, **2018**, 8, 1802139	21.8	148
401	Compositional and orientational control in metal halide perovskites of reduced dimensionality. *Nature Materials*, **2018**, 17, 900-907	27	252
400	Kinetic Versus Thermodynamic Orientational Preferences for a Series of Isomorphic Molecular Semiconductors. *ACS Omega*, **2018**, 3, 10198-10204	3.9	10
399	Stable solvent for solution-based electrical doping of semiconducting polymer films and its application to organic solar cells. *Energy and Environmental Science*, **2018**, 11, 2216-2224	35.4	26

398	Electrochemical trapping of metastable Mn ions for activation of MnO oxygen evolution catalysts. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E5261-E5268	11.5	129
397	Enhancing Molecular Alignment and Charge Transport of Solution-Sheared Semiconducting Polymer Films by the Electrical-Blade Effect. *Advanced Electronic Materials*, **2018**, 4, 1800110	6.4	21
396	Microstructural Evolution of the Thin Films of a Donor–Acceptor Semiconducting Polymer Deposited by Meniscus-Guided Coating. *Macromolecules*, **2018**, 51, 4325-4340	5.5	15
395	Understanding crystallization pathways leading to manganese oxide polymorph formation. *Nature Communications*, **2018**, 9, 2553	17.4	65
394	Perovskite-Inspired Photovoltaic Materials: Toward Best Practices in Materials Characterization and Calculations. *Chemistry of Materials*, **2017**, 29, 1964-1988	9.6	87
393	Evolution of Iodoplumbate Complexes in Methylammonium Lead Iodide Perovskite Precursor Solutions. *Chemistry of Materials*, **2017**, 29, 1315-1320	9.6	69
392	Highly Organized Smectic-like Packing in Vapor-Deposited Glasses of a Liquid Crystal. *Chemistry of Materials*, **2017**, 29, 849-858	9.6	27
391	Electric Field Tuning Molecular Packing and Electrical Properties of Solution-Shearing Coated Organic Semiconducting Thin Films. *Advanced Functional Materials*, **2017**, 27, 1605503	15.6	41
390	Thermal engineering of FAPbI perovskite material via radiative thermal annealing and in situ XRD. *Nature Communications*, **2017**, 8, 14075	17.4	110
389	Mixing Behavior in Small Molecule:Fullerene Organic Photovoltaics. *Chemistry of Materials*, **2017**, 29, 3062-3069	9.6	68
388	A highly stretchable, transparent, and conductive polymer. *Science Advances*, **2017**, 3, e1602076	14.3	674
387	Roll-to-Roll Printed Large-Area All-Polymer Solar Cells with 5% Efficiency Based on a Low Crystallinity Conjugated Polymer Blend. *Advanced Energy Materials*, **2017**, 7, 1602742	21.8	179
386	Tuning crystalline ordering by annealing and additives to study its effect on exciton diffusion in a polyalkylthiophene copolymer. *Physical Chemistry Chemical Physics*, **2017**, 19, 12441-12451	3.6	20
385	Molecular engineering to improve carrier lifetimes for organic photovoltaic devices with thick active layers. *Organic Electronics*, **2017**, 47, 57-65	3.5	5
384	Radiative Thermal Annealing/in Situ X-ray Diffraction Study of Methylammonium Lead Triiodide: Effect of Antisolvent, Humidity, Annealing Temperature Profile, and Film Substrates. *Chemistry of Materials*, **2017**, 29, 5931-5941	9.6	26
383	Exploring the influence of iron substitution in lithium rich layered oxides Li2Ru1−xFexO3: triggering the anionic redox reaction. *Journal of Materials Chemistry A*, **2017**, 5, 14387-14396	13	13
382	Correlating photovoltaic properties of a PTB7-Th:PC71BM blend to photophysics and microstructure as a function of thermal annealing. *Journal of Materials Chemistry A*, **2017**, 5, 14646-14657	13	49
381	Novel phase diagram behavior and materials design in heterostructural semiconductor alloys. *Science Advances*, **2017**, 3, e1700270	14.3	37

380	Defect-Induced Band-Edge Reconstruction of a Bismuth-Halide Double Perovskite for Visible-Light Absorption. *Journal of the American Chemical Society*, **2017**, 139, 5015-5018	16.4	206
379	In situ probing of the crystallization kinetics of rr-P3HT on single layer graphene as a function of temperature. *Physical Chemistry Chemical Physics*, **2017**, 19, 8496-8503	3.6	16
378	Effects of Molecular Structure and Packing Order on the Stretchability of Semicrystalline Conjugated Poly(Tetrathienoacene-diketopyrrolopyrrole) Polymers. *Advanced Electronic Materials*, **2017**, 3, 1600311	6.4	66
377	Solution-Phase Conformation and Dynamics of Conjugated Isoindigo-Based Donor-Acceptor Polymer Single Chains. *Journal of Physical Chemistry Letters*, **2017**, 8, 5479-5486	6.4	15
376	Vapor-Deposited Glasses with Long-Range Columnar Liquid Crystalline Order. *Chemistry of Materials*, **2017**, 29, 9110-9119	9.6	19
375	High-performance sodium–organic battery by realizing four-sodium storage in disodium rhodizonate. *Nature Energy*, **2017**, 2, 861-868	62.3	272
374	Mechanism of Tin Oxidation and Stabilization by Lead Substitution in Tin Halide Perovskites. *ACS Energy Letters*, **2017**, 2, 2159-2165	20.1	242
373	Versatile Interpenetrating Polymer Network Approach to Robust Stretchable Electronic Devices. *Chemistry of Materials*, **2017**, 29, 7645-7652	9.6	61
372	Vanadium As a Potential Membrane Material for Carbon Capture: Effects of Minor Flue Gas Species. *Environmental Science & Technology*, **2017**, 51, 11459-11467	10.3	7
371	The Atomic Scale Electrochemical Lithiation and Delithiation Process of Silicon. *Advanced Materials Interfaces*, **2017**, 4, 1700771	4.6	30
370	Crystal truncation rods from miscut surfaces. *Physical Review B*, **2017**, 95,	3.3	6
369	Using heterostructural alloying to tune the structure and properties of the thermoelectric Sn1−xCaxSe. *Journal of Materials Chemistry A*, **2017**, 5, 16873-16882	13	16
368	Taming Charge Transport in Semiconducting Polymers with Branched Alkyl Side Chains. *Advanced Functional Materials*, **2017**, 27, 1701973	15.6	59
367	Operando Spectroscopic Microscopy of LiCoO2 Cathodes Outside Standard Operating Potentials. *Electrochimica Acta*, **2017**, 247, 977-982	6.7	22
366	Point defects in Cu2ZnSnSe4 (CZTSe): Resonant X-ray diffraction study of the low-temperature order/disorder transition. *Physica Status Solidi (B): Basic Research*, **2017**, 254, 1700156	1.3	10
365	Impact of interfacial molecular orientation on radiative recombination and charge generation efficiency. *Nature Communications*, **2017**, 8, 79	17.4	160
364	Unique Reversible Crystal-to-Crystal Phase Transition—Structural and Functional Properties of Fused Ladder Thienoarenes. *Chemistry of Materials*, **2017**, 29, 7686-7696	9.6	6
363	Coupling between oxygen redox and cation migration explains unusual electrochemistry in lithium-rich layered oxides. *Nature Communications*, **2017**, 8, 2091	17.4	322

362	Simplified Models for Accelerated Structural Prediction of Conjugated Semiconducting Polymers. *Journal of Physical Chemistry C*, **2017**, 121, 26528-26538	3.8	9
361	High-fraction brookite films from amorphous precursors. *Scientific Reports*, **2017**, 7, 15232	4.9	35
360	Band Gap Tuning via Lattice Contraction and Octahedral Tilting in Perovskite Materials for Photovoltaics. *Journal of the American Chemical Society*, **2017**, 139, 11117-11124	16.4	353
359	Tuning domain size and crystallinity in isoindigo/PCBM organic solar cells via solution shearing. *Organic Electronics*, **2017**, 40, 79-87	3.5	15
358	Dynamic spectro-microscopy of nanoparticle growth and corrosion **2016**, 901-902		
357	Comparison of the Morphology Development of Polymer Fullerene and Polymer Polymer Solar Cells during Solution-Shearing Blade Coating. *Advanced Energy Materials*, **2016**, 6, 1601225	21.8	73
356	Surface structure of coherently strained ceria ultrathin films. *Physical Review B*, **2016**, 94,	3.3	3
355	Monitoring a Silent Phase Transition in CH3NH3PbI3 Solar Cells via Operando X-ray Diffraction. *ACS Energy Letters*, **2016**, 1, 1007-1012	20.1	43
354	Role of Solution Structure in Self-Assembly of Conjugated Block Copolymer Thin Films. *Macromolecules*, **2016**, 49, 8187-8197	5.5	14
353	The formation mechanism for printed silver-contacts for silicon solar cells. *Nature Communications*, **2016**, 7, 11143	17.4	73
352	In Situ Study of Silicon Electrode Lithiation with X-ray Reflectivity. *Nano Letters*, **2016**, 16, 7394-7401	11.5	48
351	Growth of Highly Strained CeO Ultrathin Films. *ACS Nano*, **2016**, 10, 9938-9947	16.7	23
350	On twin density and resistivity of nanometric Cu thin films. *Journal of Applied Physics*, **2016**, 120, 065106	2.5	9
349	The effect of sub-oxide phases on the transparency of tin-doped gallium oxide. *Applied Physics Letters*, **2016**, 109, 141909	3.4	8
348	All-Polymer Solar Cells Employing Non-Halogenated Solvent and Additive. *Chemistry of Materials*, **2016**, 28, 5037-5042	9.6	58
347	Non-Conjugated Flexible Linkers in Semiconducting Polymers: A Pathway to Improved Processability without Compromising Device Performance. *Advanced Electronic Materials*, **2016**, 2, 1600104	6.4	54
346	Tuning the Morphology of Solution-Sheared P3HT:PCBM Films. *ACS Applied Materials & Interfaces*, **2016**, 8, 1742-51	9.5	47
345	P2 NaxCoyMn1 O2 (y = 0, 0.1) as Cathode Materials in Sodium-Ion Batteries Effects of Doping and Morphology To Enhance Cycling Stability. *Chemistry of Materials*, **2016**, 28, 2041-2051	9.6	124

344	Optoelectronic Devices: Ultrahigh Mobility in an Organic Semiconductor by Vertical Chain Alignment (Adv. Mater. 12/2016). *Advanced Materials*, **2016**, 28, 2463-2463	24	
343	Compact Roll-to-Roll Coater for in Situ X-ray Diffraction Characterization of Organic Electronics Printing. *ACS Applied Materials & Interfaces*, **2016**, 8, 1687-94	9.5	32
342	Manganese□obalt hexacyanoferrate cathodes for sodium-ion batteries. *Journal of Materials Chemistry A*, **2016**, 4, 4211-4223	13	117
341	In situ X-ray-based imaging of nano materials. *Current Opinion in Chemical Engineering*, **2016**, 12, 14-21	5.4	25
340	Voltage-Controlled Interfacial Layering in an Ionic Liquid on SrTiO3. *ACS Nano*, **2016**, 10, 4565-9	16.7	25
339	Self-assembly of cholesterol tethered within hydrogel networks. *Polymer*, **2016**, 84, 371-382	3.9	3
338	Direct in situ observation of ZnO nucleation and growth via transmission X-ray microscopy. *Nanoscale*, **2016**, 8, 1849-53	7.7	12
337	Relationships between Lead Halide Perovskite Thin-Film Fabrication, Morphology, and Performance in Solar Cells. *Journal of the American Chemical Society*, **2016**, 138, 463-70	16.4	192
336	Ultrahigh Mobility in an Organic Semiconductor by Vertical Chain Alignment. *Advanced Materials*, **2016**, 28, 2359-66	24	57
335	P-Type Transparent Cu-Alloyed ZnS Deposited at Room Temperature. *Advanced Electronic Materials* , **2016**, 2, 1500396	6.4	35
334	Mechanism of Na+ Insertion in Alkali Vanadates and Its Influence on Battery Performance. *Advanced Energy Materials*, **2016**, 6, 1502336	21.8	20
333	Quantifying point defects in Cu2ZnSn(S,Se)4 thin films using resonant x-ray diffraction. *Applied Physics Letters*, **2016**, 109, 161901	3.4	9
332	Influence of amorphous structure on polymorphism in vanadia. *APL Materials*, **2016**, 4, 076103	5.7	9
331	Direct Uniaxial Alignment of a Donor-Acceptor Semiconducting Polymer Using Single-Step Solution Shearing. *ACS Applied Materials & Interfaces*, **2016**, 8, 9285-96	9.5	71
330	Characterization of heterogeneity in the Heletz sandstone from core to pore scale and quantification of its impact on multi-phase flow. *International Journal of Greenhouse Gas Control*, **2016**, 48, 69-83	4.2	29
329	Reduced crystallinity and enhanced charge transport by melt annealing of an organic semiconductor on single layer graphene. *Journal of Materials Chemistry C*, **2016**, 4, 4143-4149	7.1	14
328	Formation of Nanoscale Composites of Compound Semiconductors Driven by Charge Transfer. *Nano Letters*, **2016**, 16, 5247-54	11.5	9
327	Registration of the rotation axis in X-ray tomography. *Journal of Synchrotron Radiation*, **2015**, 22, 452-7	2.4	14

326	Reversible Multivalent (Monovalent, Divalent, Trivalent) Ion Insertion in Open Framework Materials. *Advanced Energy Materials*, **2015**, 5, 1401869	21.8	142
325	Tunable mesoscale-structured self-assembled hydrogels synthesized by organocatalytic ring-opening polymerization. *Polymer*, **2015**, 65, 93-104	3.9	2
324	Effect of Solution Shearing Method on Packing and Disorder of Organic Semiconductor Polymers. *Chemistry of Materials*, **2015**, 27, 2350-2359	9.6	81
323	Ultrahigh electrical conductivity in solution-sheared polymeric transparent films. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 14138-43	11.5	179
322	Chlorine in PbCl2-Derived Hybrid-Perovskite Solar Absorbers. *Chemistry of Materials*, **2015**, 27, 7240-7243	9.6	78
321	Flow-enhanced solution printing of all-polymer solar cells. *Nature Communications*, **2015**, 6, 7955	17.4	191
320	Effect of Al2O3 Coating on Stabilizing LiNi0.4Mn0.4Co0.2O2 Cathodes. *Chemistry of Materials*, **2015**, 27, 6146-6154	9.6	149
319	Effect of Solvent Additives on the Solution Aggregation of Phenyl-C61Butyl Acid Methyl Ester (PCBM). *Chemistry of Materials*, **2015**, 27, 8261-8272	9.6	23
318	Ultrafast Electron Transfer at Organic Semiconductor Interfaces: Importance of Molecular Orientation. *Journal of Physical Chemistry Letters*, **2015**, 6, 6-12	6.4	46
317	Enhanced Vertical Charge Transport in a Semiconducting P3HT Thin Film on Single Layer Graphene. *Advanced Functional Materials*, **2015**, 25, 664-670	15.6	124
316	Dopant activation in Sn-doped Ga2O3 investigated by X-ray absorption spectroscopy. *Applied Physics Letters*, **2015**, 107, 252103	3.4	41
315	Operando X-ray Studies of Crystalline Ge Anodes with Different Conductive Additives. *Journal of Physical Chemistry C*, **2015**, 119, 22772-22777	3.8	19
314	Hybrid Organic-Inorganic Perovskites (HOIPs): Opportunities and Challenges. *Advanced Materials*, **2015**, 27, 5102-12	24	325
313	Storage Capacity and Cycling Stability in Ge Anodes: Relationship of Anode Structure and Cycling Rate. *Advanced Energy Materials*, **2015**, 5, 1500599	21.8	45
312	Extraction of pore-morphology and capillary pressure curves of porous media from synchrotron-based tomography data. *Scientific Reports*, **2015**, 5, 10635	4.9	17
311	Rapid thermal processing chamber for in-situ x-ray diffraction. *Review of Scientific Instruments*, **2015**, 86, 013902	1.7	11
310	Structural Characterization of Vapor-Deposited Glasses of an Organic Hole Transport Material with X-ray Scattering. *Chemistry of Materials*, **2015**, 27, 3341-3348	9.6	64
309	Impact of the Crystallite Orientation Distribution on Exciton Transport in Donor-Acceptor Conjugated Polymers. *ACS Applied Materials & Interfaces*, **2015**, 7, 28035-41	9.5	19

308	Emerging In Situ and Operando Nanoscale X-Ray Imaging Techniques for Energy Storage Materials. *Advanced Functional Materials*, **2015**, 25, 1622-1637	15.6	77
307	Thermotropic Phase Transition of Benzodithiophene Copolymer Thin Films and Its Impact on Electrical and Photovoltaic Characteristics. *Chemistry of Materials*, **2015**, 27, 1223-1232	9.6	10
306	X-Ray Absorption Spectroscopy Study of Structure and Stability of Disordered (Cu $_{bf 2}$SnS$_{bf 3}$) $_{bf 1-x}$(ZnS)$_{bf x}$ Alloys. *IEEE Journal of Photovoltaics*, **2015**, 5, 372-377	3.7	15
305	Effects of aromatic regularity on the structure and conductivity of polyimide-poly(ethylene glycol) materials doped with ionic liquid. *Journal of Polymer Science, Part B: Polymer Physics*, **2015**, 53, 509-521	2.6	7
304	Effect of Backbone Regioregularity on the Structure and Orientation of a Donor−Acceptor Semiconducting Copolymer. *Macromolecules*, **2014**, 47, 1403-1410	5.5	67
303	Impact of Hole Transport Layer Surface Properties on the Morphology of a Polymer-Fullerene Bulk Heterojunction. *Advanced Energy Materials*, **2014**, 4, 1301879	21.8	26
302	A mechanistic understanding of processing additive-induced efficiency enhancement in bulk heterojunction organic solar cells. *Advanced Materials*, **2014**, 26, 300-5	24	133
301	Effect of Non-Chlorinated Mixed Solvents on Charge Transport and Morphology of Solution-Processed Polymer Field-Effect Transistors. *Advanced Functional Materials*, **2014**, 24, 3524-3534	15.6	73
300	Mechanism of Crystallization and Implications for Charge Transport in Poly(3-ethylhexylthiophene) Thin Films. *Advanced Functional Materials*, **2014**, 24, 4515-4521	15.6	58
299	Substrate-induced variations of molecular packing, dynamics, and intermolecular electronic couplings in pentacene monolayers on the amorphous silica dielectric. *ACS Nano*, **2014**, 8, 690-700	16.7	22
298	Control of the Electrical Properties in Spinel Oxides by Manipulating the Cation Disorder. *Advanced Functional Materials*, **2014**, 24, 610-618	15.6	86
297	Sequentially solution-processed, nanostructured polymer photovoltaics using selective solvents. *Energy and Environmental Science*, **2014**, 7, 1103	35.4	49
296	Ultra-high mobility transparent organic thin film transistors grown by an off-centre spin-coating method. *Nature Communications*, **2014**, 5, 3005	17.4	975
295	Full open-framework batteries for stationary energy storage. *Nature Communications*, **2014**, 5, 3007	17.4	367
294	The Role of Solvent Additive Processing in High Performance Small Molecule Solar Cells. *Chemistry of Materials*, **2014**, 26, 6531-6541	9.6	54
293	Morphological Origin of Charge Transport Anisotropy in Aligned Polythiophene Thin Films. *Advanced Functional Materials*, **2014**, 24, 3422-3431	15.6	66
292	Understanding the selective etching of electrodeposited ZnO nanorods. *Langmuir*, **2014**, 30, 14079-85	4	14
291	Use of a commercially available nucleating agent to control the morphological development of solution-processed small molecule bulk heterojunction organic solar cells. *Journal of Materials Chemistry A*, **2014**, 2, 15717-15721	13	40

290	In situ nanotomography and operando transmission X-ray microscopy of micron-sized Ge particles. *Energy and Environmental Science*, **2014**, 7, 2771-2777	35.4	110
289	Understanding Phase Transformation in Crystalline Ge Anodes for Li-Ion Batteries. *Chemistry of Materials*, **2014**, 26, 3739-3746	9.6	98
288	Experimental Characterization of a Theoretically Designed Candidate p-Type Transparent Conducting Oxide: Li-Doped Cr2MnO4. *Chemistry of Materials*, **2014**, 26, 4598-4604	9.6	13
287	Tuning the Morphology of All-Polymer OPVs through Altering Polymer–Solvent Interactions. *Chemistry of Materials*, **2014**, 26, 5020-5027	9.6	49
286	Crystallization-Induced Phase Separation in Solution-Processed Small Molecule Bulk Heterojunction Organic Solar Cells. *Advanced Functional Materials*, **2014**, 24, 3543-3550	15.6	59
285	Molecular Interactions and Ordering in Electrically Doped Polymers: Blends of PBTTT and F4TCNQ. *Macromolecules*, **2014**, 47, 6836-6846	5.5	138
284	Self-Doping and Electrical Conductivity in Spinel Oxides: Experimental Validation of Doping Rules. *Chemistry of Materials*, **2014**, 26, 1867-1873	9.6	31
283	Ordering effects in benzo[1,2-b:4,5-b']difuran-thieno[3,4-c]pyrrole-4,6-dione polymers with >7% solar cell efficiency. *Advanced Materials*, **2014**, 26, 4357-62	24	80
282	Operando Transmission X-ray Microscopy Studies on Li-Ion Batteries. *Microscopy and Microanalysis*, **2014**, 20, 1526-1527	0.5	2
281	Spectromicroscopy and coherent diffraction imaging: focus on energy materials applications. *Journal of Synchrotron Radiation*, **2014**, 21, 1019-30	2.4	25
280	Dependence of crystallite formation and preferential backbone orientations on the side chain pattern in PBDTTPD polymers. *ACS Applied Materials & Interfaces*, **2014**, 6, 19477-81	9.5	35
279	Chloride in Lead Chloride-Derived Organo-Metal Halides for Perovskite-Absorber Solar Cells. *Chemistry of Materials*, **2014**, 26, 7158-7165	9.6	230
278	High-resolution x-ray analysis of graphene grown on 4H-SiC ((000bar 1)) at low pressures. *Journal of Materials Research*, **2014**, 29, 439-446	2.5	1
277	Controlling Solution-Phase Polymer Aggregation with Molecular Weight and Solvent Additives to Optimize Polymer-Fullerene Bulk Heterojunction Solar Cells. *Advanced Energy Materials*, **2014**, 4, 1301733	21.8	182
276	A general relationship between disorder, aggregation and charge transport in conjugated polymers. *Nature Materials*, **2013**, 12, 1038-44	27	1435
275	Controlling the texture and crystallinity of evaporated lead phthalocyanine thin films for near-infrared sensitive solar cells. *ACS Applied Materials & Interfaces*, **2013**, 5, 8505-15	9.5	49
274	Effect of Surfactant Concentration and Aggregation on the Growth Kinetics of Nickel Nanoparticles. *Journal of Physical Chemistry C*, **2013**, 117, 16709-16718	3.8	58
273	Effects of odd-even side chain length of alkyl-substituted diphenylbithiophenes on first monolayer thin film packing structure. *Journal of the American Chemical Society*, **2013**, 135, 11006-14	16.4	71

272	Charge Transport in Highly Face-On Poly(3-hexylthiophene) Films. *Journal of Physical Chemistry C*, **2013**, 117, 17421-17428	3.8	78
271	Efficient energy sensitization of C60 and application to organic photovoltaics. *Journal of the American Chemical Society*, **2013**, 135, 11920-8	16.4	15
270	Vertical confinement and interface effects on the microstructure and charge transport of P3HT thin films. *Journal of Polymer Science, Part B: Polymer Physics*, **2013**, 51, 611-620	2.6	77
269	Swelling of Polymer Dielectric Thin Films for Organic-Transistor-Based Aqueous Sensing Applications. *Chemistry of Materials*, **2013**, 25, 5018-5022	9.6	6
268	Dynamical Orientation of Large Molecules on Oxide Surfaces and its Implications for Dye-Sensitized Solar Cells. *Chemistry of Materials*, **2013**, 25, 4354-4363	9.6	15
267	Enhanced solid-state order and field-effect hole mobility through control of nanoscale polymer aggregation. *Journal of the American Chemical Society*, **2013**, 135, 19229-36	16.4	170
266	Tuning Contact Recombination and Open-Circuit Voltage in Polymer Solar Cells via Self-Assembled Monolayer Adsorption at the Organic□Metal Oxide Interface. *Journal of Physical Chemistry C*, **2013**, 117, 20474-20484	3.8	35
265	Rapid fabrication of a novel Sn□e alloy: structure□property relationship and its enhanced lithium storage properties. *Journal of Materials Chemistry A*, **2013**, 1, 14577	13	42
264	Dealloyed PdCu3 thin film electrocatalysts for oxygen reduction reaction. *Journal of Power Sources*, **2013**, 222, 169-176	8.9	50
263	Comparison of the Photovoltaic Characteristics and Nanostructure of Fullerenes Blended with Conjugated Polymers with Siloxane-Terminated and Branched Aliphatic Side Chains. *Chemistry of Materials*, **2013**, 25, 431-440	9.6	71
262	Scalable and selective dispersion of semiconducting arc-discharged carbon nanotubes by dithiafulvalene/thiophene copolymers for thin film transistors. *ACS Nano*, **2013**, 7, 2659-68	16.7	79
261	Behaviors of Fe, Zn, and Ga Substitution in CuInS2 Nanoparticles Probed with Anomalous X-ray Diffraction. *Chemistry of Materials*, **2013**, 25, 320-325	9.6	17
260	Effects of Confinement on Microstructure and Charge Transport in High Performance Semicrystalline Polymer Semiconductors. *Advanced Functional Materials*, **2013**, 23, 2091-2098	15.6	68
259	Can polymorphism be used to form branched metal nanostructures?. *Advanced Materials*, **2013**, 25, 1552-6	24	62
258	The chemical and structural origin of efficient p-type doping in P3HT. *Organic Electronics*, **2013**, 14, 1330-1336	3.5	219
257	The Importance of Fullerene Percolation in the Mixed Regions of Polymer□Fullerene Bulk Heterojunction Solar Cells. *Advanced Energy Materials*, **2013**, 3, 364-374	21.8	386
256	Two-dimensional GIWAXS reveals a transient crystal phase in solution-processed thermally converted tetrabenzoporphyrin. *Journal of Physical Chemistry B*, **2013**, 117, 14557-67	3.4	19
255	Cross-Linked Ultrathin Polyurea Films via Molecular Layer Deposition. *Macromolecules*, **2013**, 46, 5638-5643	5.8	43

254	Ultrathin body poly(3-hexylthiophene) transistors with improved short-channel performance. *ACS Applied Materials & Interfaces*, **2013**, 5, 2342-6	9.5	24
253	Synthesis, solid-state, and charge-transport properties of conjugated polythiophene-S,S-dioxides. *Journal of Polymer Science, Part B: Polymer Physics*, **2013**, 51, 48-56	2.6	22
252	Vertically Segregated Structure and Properties of Small Molecule–Polymer Blend Semiconductors for Organic Thin-Film Transistors. *Advanced Functional Materials*, **2013**, 23, 366-376	15.6	97
251	Identifying and managing radiation damage during in situ transmission x-ray microscopy of Li-ion batteries **2013**,		23
250	Structural and rheological properties of meibomian lipid **2013**, 54, 2720-32		49
249	Co3O4□Co2ZnO4 spinels: The case for a solid solution. *Journal of Solid State Chemistry*, **2012**, 190, 143-149	3.3	13
248	Fabrication of organic semiconductor crystalline thin films and crystals from solution by confined crystallization. *Organic Electronics*, **2012**, 13, 235-243	3.5	32
247	Probing the effect of substrate heating during deposition of DCV4T:C60 blend layers for organic solar cells. *Organic Electronics*, **2012**, 13, 623-631	3.5	20
246	Electron mean free path of tungsten and the electrical resistivity of epitaxial (110) tungsten films. *Physical Review B*, **2012**, 86,	3.3	63
245	Interplay between magnetism and chemical structure at spinel-spinel interfaces. *Journal of Applied Physics*, **2012**, 111, 093903	2.5	7
244	Temperature-induced transitions in the structure and interfacial rheology of human meibum. *Biophysical Journal*, **2012**, 102, 369-76	2.9	41
243	5,11-Conjugation-extended low-bandgap anthradithiophene-containing polymer exhibiting enhanced thin-film order and field-effect mobility. *Chemical Communications*, **2012**, 48, 7286-8	5.8	15
242	Time-resolved structural evolution of additive-processed bulk heterojunction solar cells. *Journal of the American Chemical Society*, **2012**, 134, 2884-7	16.4	117
241	A Quantitative Correlation between the Mobility and Crystallinity of Photo-Cross-Linkable P3HT. *Macromolecules*, **2012**, 45, 3057-3062	5.5	40
240	The crystalline structure of copper phthalocyanine films on ZnO(1100). *Journal of the American Chemical Society*, **2012**, 134, 14302-5	16.4	22
239	Chemical Annealing of Zinc Tetraphenylporphyrin Films: Effects on Film Morphology and Organic Photovoltaic Performance. *Chemistry of Materials*, **2012**, 24, 2583-2591	9.6	21
238	In situ X-ray diffraction studies of (de)lithiation mechanism in silicon nanowire anodes. *ACS Nano*, **2012**, 6, 5465-73	16.7	137
237	Quantitative determination of organic semiconductor microstructure from the molecular to device scale. *Chemical Reviews*, **2012**, 112, 5488-519	68.1	922

236	High-capacity micrometer-sized Li2S particles as cathode materials for advanced rechargeable lithium-ion batteries. *Journal of the American Chemical Society*, **2012**, 134, 15387-94	16.4	524
235	Impact of regioregularity on thin-film transistor and photovoltaic cell performances of pentacene-containing polymers. *Journal of Materials Chemistry*, **2012**, 22, 4356		13
234	Use of X-ray diffraction, molecular simulations, and spectroscopy to determine the molecular packing in a polymer-fullerene bimolecular crystal. *Advanced Materials*, **2012**, 24, 6071-9	24	113
233	Factors Governing Intercalation of Fullerenes and Other Small Molecules Between the Side Chains of Semiconducting Polymers Used in Solar Cells. *Advanced Energy Materials*, **2012**, 2, 1208-1217	21.8	90
232	Narrow-band-gap conjugated chromophores with extended molecular lengths. *Journal of the American Chemical Society*, **2012**, 134, 20609-12	16.4	123
231	Poly(3-hexylthiophene) and [6,6]-Phenyl-C61-butyric Acid Methyl Ester Mixing in Organic Solar Cells. *Macromolecules*, **2012**, 45, 6587-6599	5.5	93
230	Synthesis, alignment, and magnetic properties of monodisperse nickel nanocubes. *Journal of the American Chemical Society*, **2012**, 134, 855-8	16.4	130
229	Role of confinement and aggregation in charge transport in semicrystalline polythiophene thin films. *Physical Review B*, **2012**, 86,	3.3	90
228	A simple droplet pinning method for polymer film deposition for measuring charge transport in a thin film transistor. *Organic Electronics*, **2012**, 13, 2450-2460	3.5	40
227	Manipulating the Morphology of P3HT–PCBM Bulk Heterojunction Blends with Solvent Vapor Annealing. *Chemistry of Materials*, **2012**, 24, 3923-3931	9.6	151
226	Molecular packing and solar cell performance in blends of polymers with a bisadduct fullerene. *Nano Letters*, **2012**, 12, 1566-70	11.5	132
225	Controlling spin ordering in frustrated magnets via thin film heteroepitaxy. *Physical Review B*, **2012**, 85,	3.3	7
224	Side-chain tunability of furan-containing low-band-gap polymers provides control of structural order in efficient solar cells. *Journal of the American Chemical Society*, **2012**, 134, 2180-5	16.4	437
223	In Operando X-ray diffraction and transmission X-ray microscopy of lithium sulfur batteries. *Journal of the American Chemical Society*, **2012**, 134, 6337-43	16.4	428
222	Molecular structure of interfacial human meibum films. *Langmuir*, **2012**, 28, 11858-65	4	38
221	Three-dimensional packing structure and electronic properties of biaxially oriented poly(2,5-bis(3-alkylthiophene-2-yl)thieno[3,2-b]thiophene) films. *Journal of the American Chemical Society*, **2012**, 134, 6177-90	16.4	93
220	Measuring Domain Sizes and Compositional Heterogeneities in P3HT-PCBM Bulk Heterojunction Thin Films with 1H Spin Diffusion NMR Spectroscopy. *Advanced Functional Materials*, **2012**, 22, 1255-1266	15.6	45
219	Reticulated Organic Photovoltaics. *Advanced Functional Materials*, **2012**, 22, 1167-1173	15.6	12

218	A Supramolecular Complex in Small-Molecule Solar Cells based on Contorted Aromatic Molecules. *Angewandte Chemie*, **2012**, 124, 8722-8725	3.6	9
217	A supramolecular complex in small-molecule solar cells based on contorted aromatic molecules. *Angewandte Chemie - International Edition*, **2012**, 51, 8594-7	16.4	76
216	Growth Trajectories and Coarsening Mechanisms of Metal Nanoparticle Electrocatalysts. *ChemCatChem*, **2012**, 4, 766-770	5.2	25
215	Evolution of nanoscale roughness in Cu/SiO2 and Cu/Ta interfaces. *Applied Physics Letters*, **2012**, 100, 024106	3.4	7
214	Mitigating residual stress in Cu metallization. *Applied Physics Letters*, **2012**, 101, 231906	3.4	3
213	Effect of sintering conditions on mixed ionic-electronic conducting properties of silver sulfide nanoparticles. *Journal of Applied Physics*, **2012**, 111, 053530	2.5	3
212	Understanding stress gradients in microelectronic metallization. *Powder Diffraction*, **2012**, 27, 92-98	1.8	2
211	Structure and Mechanism of Strength Enhancement in Interpenetrating Polymer Network Hydrogels. *Macromolecules*, **2011**, 44, 5776-5787	5.5	84
210	Side chain engineering of fused aromatic thienopyrazine based low band-gap polymers for enhanced charge carrier mobility. *Journal of Materials Chemistry*, **2011**, 21, 1537-1543		28
209	Siloxane-terminated solubilizing side chains: bringing conjugated polymer backbones closer and boosting hole mobilities in thin-film transistors. *Journal of the American Chemical Society*, **2011**, 133, 20130-3	16.4	582
208	Insertion mechanism of a poly(ethylene oxide)-poly(butylene oxide) block copolymer into a DPPC monolayer. *Langmuir*, **2011**, 27, 11444-50	4	22
207	Influence of surfactant structure on reverse micelle size and charge for nonpolar electrophoretic inks. *Langmuir*, **2011**, 27, 11845-51	4	56
206	Tuning charge transport in solution-sheared organic semiconductors using lattice strain. *Nature*, **2011**, 480, 504-8	50.4	855
205	Zone-refinement effect in small molecule-polymer blend semiconductors for organic thin-film transistors. *Journal of the American Chemical Society*, **2011**, 133, 412-5	16.4	53
204	Molecular packing of high-mobility diketo pyrrolo-pyrrole polymer semiconductors with branched alkyl side chains. *Journal of the American Chemical Society*, **2011**, 133, 15073-84	16.4	353
203	How Nanoparticles Coalesce: An in Situ Study of Au Nanoparticle Aggregation and Grain Growth. *Chemistry of Materials*, **2011**, 23, 3312-3317	9.6	138
202	3,4-Disubstituted polyalkylthiophenes for high-performance thin-film transistors and photovoltaics. *Journal of the American Chemical Society*, **2011**, 133, 16722-5	16.4	64
201	Size Dependence of a Temperature-Induced Solid–Solid Phase Transition in Copper(I) Sulfide. *Journal of Physical Chemistry Letters*, **2011**, 2, 2402-2406	6.4	102

200	Real-Time Observation of Poly(3-alkylthiophene) Crystallization and Correlation with Transient Optoelectronic Properties. *Macromolecules*, **2011**, 44, 6653-6658	5.5	92
199	Structural origin of gap states in semicrystalline polymers and the implications for charge transport. *Physical Review B*, **2011**, 83,	3.3	166
198	Quantitative analysis of lattice disorder and crystallite size in organic semiconductor thin films. *Physical Review B*, **2011**, 84,	3.3	210
197	Inverse design approach to hole doping in ternary oxides: Enhancing p-type conductivity in cobalt oxide spinels. *Physical Review B*, **2011**, 84,	3.3	74
196	Modular construction of P3HT/PCBM planar-heterojunction solar cells by lamination allows elucidation of processing–structure–function relationships. *Organic Electronics*, **2011**, 12, 1963-1972	3.5	17
195	Observation of transient structural-transformation dynamics in a Cu2S nanorod. *Science*, **2011**, 333, 206-9	33.3	202
194	Molecular order in high-efficiency polymer/fullerene bulk heterojunction solar cells. *ACS Nano*, **2011**, 5, 8248-57	16.7	243
193	SAXSMorph: a program for generating representative morphologies for two-phase materials from small-angle X-ray and neutron scattering data. *Journal of Applied Crystallography*, **2011**, 44, 221-224	3.8	7
192	The phase behavior of a polymer-fullerene bulk heterojunction system that contains bimolecular crystals. *Journal of Polymer Science, Part B: Polymer Physics*, **2011**, 49, 499-503	2.6	70
191	Effects of thermal annealing upon the nanomorphology of poly(3-hexylselenophene)-PCBM blends. *Macromolecular Rapid Communications*, **2011**, 32, 1454-60	4.8	15
190	In Situ Observation of Strain Development and Porosity Evolution in Nanoporous Gold Foils. *Advanced Functional Materials*, **2011**, 21, 3938-3946	15.6	51
189	Anisotropic Structure and Charge Transport in Highly Strain-Aligned Regioregular Poly(3-hexylthiophene). *Advanced Functional Materials*, **2011**, 21, 3697-3705	15.6	253
188	Molecular characterization of organic electronic films. *Advanced Materials*, **2011**, 23, 319-37	24	190
187	Structural order in bulk heterojunction films prepared with solvent additives. *Advanced Materials*, **2011**, 23, 2284-8	24	241
186	Solution-processed nanostructured benzoporphyrin with polycarbonate binder for photovoltaics. *Advanced Materials*, **2011**, 23, 2289-93	24	35
185	Interdiffusion of PCBM and P3HT Reveals Miscibility in a Photovoltaically Active Blend. *Advanced Energy Materials*, **2011**, 1, 82-89	21.8	546
184	Morphology-Dependent Trap Formation in High Performance Polymer Bulk Heterojunction Solar Cells. *Advanced Energy Materials*, **2011**, 1, 954-962	21.8	176
183	Simple Synthesis and Functionalization of Iron Nanoparticles for Magnetic Resonance Imaging. *Angewandte Chemie*, **2011**, 123, 4292-4295	3.6	14

182	Simple synthesis and functionalization of iron nanoparticles for magnetic resonance imaging. *Angewandte Chemie - International Edition*, **2011**, 50, 4206-9	16.4	138
181	Synthesis of regioregular pentacene-containing conjugated polymers. *Journal of Materials Chemistry*, **2011**, 21, 7078		18
180	In situ measurement of power conversion efficiency and molecular ordering during thermal annealing in P3HT:PCBM bulk heterojunction solar cells. *Journal of Materials Chemistry*, **2011**, 21, 15224		77
179	Controlling the Microstructure of Solution-Processable Small Molecules in Thin-Film Transistors through Substrate Chemistry. *Chemistry of Materials*, **2011**, 23, 1194-1203	9.6	57
178	Mechanistic Studies on Sintering of Silver Nanoparticles. *Chemistry of Materials*, **2011**, 23, 4634-4640	9.6	68
177	Nonequilibrium 2-hydroxyoctadecanoic acid monolayers: effect of electrolytes. *Langmuir*, **2011**, 27, 4430-8		8
176	Dealloying of Cu3Pt (111) Studied by Surface X-ray Scattering. *Journal of Physical Chemistry C*, **2011**, 115, 9074-9080	3.8	61
175	A modular molecular framework for utility in small-molecule solution-processed organic photovoltaic devices. *Journal of Materials Chemistry*, **2011**, 21, 12700		169
174	Drastic Control of Texture in a High Performance n-Type Polymeric Semiconductor and Implications for Charge Transport. *Macromolecules*, **2011**, 44, 5246-5255	5.5	250
173	Influence of substrate on crystallization in polythiophene/fullerene blends. *Solar Energy Materials and Solar Cells*, **2011**, 95, 1375-1381	6.4	42
172	Asymmetric cation nonstoichiometry in spinels: Site occupancy in Co2ZnO4 and Rh2ZnO4. *Physical Review B*, **2011**, 84,	3.3	24
171	Phase, grain structure, stress, and resistivity of sputter-deposited tungsten films. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2011**, 29, 051512	2.9	66
170	Correlating the scattered intensities of P3HT and PCBM to the current densities of polymer solar cells. *Chemical Communications*, **2011**, 47, 436-8	5.8	100
169	Lattice-strain control of the activity in dealloyed core-shell fuel cell catalysts. *Nature Chemistry*, **2010**, 2, 454-60	17.6	2116
168	X-Ray Probes for In Situ Studies of Interfaces. *MRS Bulletin*, **2010**, 35, 504-513	3.2	17
167	In situ evolution of stress gradients in Cu films induced by capping layers. *Applied Physics Letters*, **2010**, 96, 261903	3.4	5
166	Organic Solar Cells: How X-ray Scattering Has Improved Our Understanding of Morphology. *Synchrotron Radiation News*, **2010**, 23, 16-21	0.6	7
165	Modified magnetic ground state in NiMn2O4 thin films. *Physical Review B*, **2010**, 82,	3.3	23

164	Interfacial Segregation in Polymer/Fullerene Blend Films for Photovoltaic Devices. *Macromolecules*, **2010**, 43, 3828-3836	5.5	177
163	Synchrotron x-ray diffraction measurements of strain in metallic nanoparticles with oxide shells. *Journal Physics D: Applied Physics*, **2010**, 43, 075301	3	9
162	Morphology of Photopolymerized End-linked Poly(ethylene glycol) Hydrogels by Small Angle X-ray Scattering. *Macromolecules*, **2010**, 43, 6861-6870	5.5	74
161	Small-Molecule Thiophene-C60 Dyads As Compatibilizers in Inverted Polymer Solar Cells. *Chemistry of Materials*, **2010**, 22, 5762-5773	9.6	61
160	Synthesis and characterization of K(8-x)(H2)ySi46. *Inorganic Chemistry*, **2010**, 49, 815-22	5.1	25
159	Reversible Soft-Contact Lamination and Delamination for Non-Invasive Fabrication and Characterization of Bulk-Heterojunction and Bilayer Organic Solar Cells. *Chemistry of Materials*, **2010**, 22, 4931-4938	9.6	43
158	Synthesis, properties, and electronic applications of size-controlled poly(3-hexylthiophene) nanoparticles. *Langmuir*, **2010**, 26, 13056-61	4	87
157	Structure of Dealloyed PtCu3 Thin Films and Catalytic Activity for Oxygen Reduction. *Chemistry of Materials*, **2010**, 22, 4712-4720	9.6	166
156	Thiophene-rich fused-aromatic thienopyrazine acceptor for donor□cceptor low band-gap polymers for OTFT and polymer solar cell applications. *Journal of Materials Chemistry*, **2010**, 20, 5823		76
155	Device-scale perpendicular alignment of colloidal nanorods. *Nano Letters*, **2010**, 10, 195-201	11.5	223
154	Quantification of thin film crystallographic orientation using X-ray diffraction with an area detector. *Langmuir*, **2010**, 26, 9146-51	4	262
153	Ultrafast growth of highly branched palladium nanostructures for catalysis. *ACS Nano*, **2010**, 4, 396-402	16.7	183
152	Laser-synthesized epitaxial graphene. *ACS Nano*, **2010**, 4, 7524-30	16.7	67
151	High efficiency amine functionalization of cycloolefin polymer surfaces for biodiagnostics. *Journal of Materials Chemistry*, **2010**, 20, 4116		46
150	Surface and grain-boundary scattering in nanometric Cu films. *Physical Review B*, **2010**, 81,	3.3	141
149	Photovoltaic universal joints: ball-and-socket interfaces in molecular photovoltaic cells. *ChemPhysChem*, **2010**, 11, 799-803	3.2	65
148	Effects of Thermal Annealing Upon the Morphology of Polymer□ullerene Blends. *Advanced Functional Materials*, **2010**, 20, 3519-3529	15.6	493
147	Unconventional face-on texture and exceptional in-plane order of a high mobility n-type polymer. *Advanced Materials*, **2010**, 22, 4359-63	24	317

146	Structural properties of epitaxial SrHfO3 thin films on Si (001). *Thin Solid Films*, **2010**, 518, S118-S122	2.2	21
145	Pressure-induced quenching of the charge-density-wave state in rare-earth tritellurides observed by x-ray diffraction. *Physical Review B*, **2009**, 79,	3.3	25
144	Bimolecular Crystals of Fullerenes in Conjugated Polymers and the Implications of Molecular Mixing for Solar Cells. *Advanced Functional Materials*, **2009**, 19, 1173-1179	15.6	373
143	The Role of OTS Density on Pentacene and C60 Nucleation, Thin Film Growth, and Transistor Performance. *Advanced Functional Materials*, **2009**, 19, 1962-1970	15.6	209
142	Charge-Transport Anisotropy Due to Grain Boundaries in Directionally Crystallized Thin Films of Regioregular Poly(3-hexylthiophene). *Advanced Materials*, **2009**, 21, 1568-1572	24	286
141	Precise Structure of Pentacene Monolayers on Amorphous Silicon Oxide and Relation to Charge Transport. *Advanced Materials*, **2009**, 21, 2294-2298	24	173
140	Controlling Nucleation and Crystallization in Solution-Processed Organic Semiconductors for Thin-Film Transistors. *Advanced Materials*, **2009**, 21, 3605-3609	24	129
139	Large modulation of carrier transport by grain-boundary molecular packing and microstructure in organic thin films. *Nature Materials*, **2009**, 8, 952-8	27	376
138	In situ USAXS measurements of titania colloidal paint films during the drying process. *Journal of Colloid and Interface Science*, **2009**, 336, 612-5	9.3	12
137	Clipped Random Wave Morphologies and the Analysis of the SAXS of an Ionomer Formed by Copolymerization of Tetrafluoroethylene and CF2?CFO(CF2)4SO3H. *Macromolecules*, **2009**, 42, 5774-5780	5.5	24
136	Improved Efficiency in Poly(3-hexylthiophene)/Zinc Oxide Solar Cells via Lithium Incorporation. *Journal of Physical Chemistry C*, **2009**, 113, 17608-17612	3.8	21
135	Influence of Interfacial Layer Between Nanoparticles and Polymeric Matrix on Viscoelastic Properties of Hydrogel Nanocomposites. *Macromolecules*, **2009**, 42, 1331-1343	5.5	10
134	Solution-Processable □Distyryl Oligothiophene Semiconductors with Enhanced Environmental Stability. *Chemistry of Materials*, **2009**, 21, 1927-1938	9.6	27
133	Controlling the orientation of terraced nanoscale "ribbons" of a poly(thiophene) semiconductor. *ACS Nano*, **2009**, 3, 780-7	16.7	145
132	Molecular design for improved photovoltaic efficiency: band gap and absorption coefficient engineering. *Journal of Materials Chemistry*, **2009**, 19, 7195		67
131	Crystalline ultrasmooth self-assembled monolayers of alkylsilanes for organic field-effect transistors. *Journal of the American Chemical Society*, **2009**, 131, 9396-404	16.4	493
130	In situ and ex situ studies of platinum nanocrystals: growth and evolution in solution. *Journal of the American Chemical Society*, **2009**, 131, 14590-5	16.4	151
129	Interplay between Energetic and Kinetic Factors on the Ambient Stability of n-Channel Organic Transistors Based on Perylene Diimide Derivatives. *Chemistry of Materials*, **2009**, 21, 5508-5518	9.6	77

128	Tuning the properties of polymer bulk heterojunction solar cells by adjusting fullerene size to control intercalation. *Nano Letters*, **2009**, 9, 4153-7	11.5	235
127	Dominant role of grain boundary scattering in the resistivity of nanometric Cu films. *Physical Review B*, **2009**, 79,	3.3	84
126	Preparation of crystalline dielectric modification silane layer by spin-coating and its improvements on organic transistor performance **2009**,		1
125	Size and composition distribution dynamics of alloy nanoparticle electrocatalysts probed by anomalous small angle X-ray scattering (ASAXS). *Faraday Discussions*, **2008**, 140, 283-96; discussion 297-317	3.6	66
124	Langmuir monolayers of straight-chain and branched hexadecanol and eicosanol mixtures. *Langmuir*, **2008**, 24, 14005-14	4	12
123	Microstructure of Oligofluorene Asymmetric Derivatives in Organic Thin Film Transistors. *Chemistry of Materials*, **2008**, 20, 2763-2772	9.6	32
122	Effect of chemical pressure on the charge density wave transition in rare-earth tritellurides RTe3. *Physical Review B*, **2008**, 77,	3.3	137
121	Molecular Basis of Mesophase Ordering in a Thiophene-Based Copolymer. *Macromolecules*, **2008**, 41, 5709-5715	5.5	97
120	Square grains in asymmetric rod-coil block copolymers. *Langmuir*, **2008**, 24, 1604-7	4	15
119	In Situ Synchrotron X-ray Diffraction Experiments on Electrochemically Deposited ZnO Nanostructures. *Journal of Physical Chemistry C*, **2008**, 112, 14863-14866	3.8	12
118	Crystalline Structure in Thin Films of DEH-PPV Homopolymer and PPV-b-PI Rod-Coil Block Copolymers. *Macromolecules*, **2008**, 41, 58-66	5.5	40
117	The influence of poly(3-hexylthiophene) regioregularity on fullerene-composite solar cell performance. *Journal of the American Chemical Society*, **2008**, 130, 16324-9	16.4	378
116	Thin film structure of tetraceno[2,3-b]thiophene characterized by grazing incidence X-ray scattering and near-edge X-ray absorption fine structure analysis. *Journal of the American Chemical Society*, **2008**, 130, 3502-8	16.4	61
115	Interfacial effects in thin films of polymeric semiconductors. *Journal of Vacuum Science & Technology B*, **2008**, 26, 1454		5
114	Strain development in nanoporous metallic foils formed by dealloying. *Applied Physics Letters*, **2008** , 92, 043118	3.4	31
113	Correlating the microstructure of thin films of poly[5,5-bis(3-dodecyl-2-thienyl)-2,2-bithiophene] with charge transport: Effect of dielectric surface energy and thermal annealing. *Physical Review B*, **2008**, 78,	3.3	66
112	Particle size effect of hydrogen-induced lattice expansion of palladium nanoclusters. *Physical Review B*, **2008**, 78,	3.3	68
111	Charge density wave formation in R2Te5 (R=Nd, Sm, and Gd). *Physical Review B*, **2008**, 77,	3.3	10

110	Structure-Activity-Stability Relationships of Pt□Co Alloy Electrocatalysts in Gas-Diffusion Electrode Layers. *Journal of Physical Chemistry C*, **2007**, 111, 3744-3752	3.8	175
109	Thin Film Transistors Based on Alkylphenyl Quaterthiophenes: Structure and Electrical Transport Properties. *Chemistry of Materials*, **2007**, 19, 1355-1361	9.6	22
108	Enrichment of deuterium oxide at hydrophilic interfaces in aqueous solutions. *Langmuir*, **2007**, 23, 11943-46	4	2
107	Activity□tability relationships of ordered and disordered alloy phases of Pt3Co electrocatalysts for the oxygen reduction reaction (ORR). *Electrochimica Acta*, **2007**, 52, 2765-2774	6.7	149
106	Structure of oxidized bismuth nanoclusters. *Acta Crystallographica Section B: Structural Science*, **2007**, 63, 569-76		11
105	Critical Role of Side-Chain Attachment Density on the Order and Device Performance of Polythiophenes. *Macromolecules*, **2007**, 40, 7960-7965	5.5	297
104	X-ray scattering study of thin films of poly(2,5-bis(3-alkylthiophen-2-yl)thieno[3,2-b]thiophene). *Journal of the American Chemical Society*, **2007**, 129, 3226-37	16.4	317
103	Significant dependence of morphology and charge carrier mobility on substrate surface chemistry in high performance polythiophene semiconductor films. *Applied Physics Letters*, **2007**, 90, 062117	3.4	125
102	Structural properties of epitaxial □Al2O3 (111) thin films on 4H-SiC (0001). *Applied Physics Letters*, **2007**, 90, 061916	3.4	14
101	Engineering epitaxial □Al2O3 gate dielectric films on 4H-SiC. *Journal of Applied Physics*, **2007**, 102, 104112	2.5	20
100	Effects of the surface roughness of plastic-compatible inorganic dielectrics on polymeric thin film transistors. *Applied Physics Letters*, **2007**, 90, 233508	3.4	63
99	Highly oriented crystals at the buried interface in polythiophene thin-film transistors. *Nature Materials*, **2006**, 5, 222-228	27	701
98	Liquid-crystalline semiconducting polymers with high charge-carrier mobility. *Nature Materials*, **2006**, 5, 328-33	27	1836
97	Structural effect of PtRu□WO3 alloy nanostructures on methanol electrooxidation. *Electrochemistry Communications*, **2006**, 8, 359-363	5.1	23
96	p-Channel organic semiconductors based on hybrid acene-thiophene molecules for thin-film transistor applications. *Journal of the American Chemical Society*, **2005**, 127, 3997-4009	16.4	192
95	Structure and electrocatalysis of sputtered RuPt thin-film electrodes. *Journal of Physical Chemistry B*, **2005**, 109, 12845-9	3.4	9
94	Local atomic structure of partially ordered NiMn in NiMn/NiFe exchange coupled layers: 1. XAFS measurements and structural refinement. *Journal of Physical Chemistry B*, **2005**, 109, 10406-18	3.4	9
93	Agglomeration and sintering in annealed FePt nanoparticle assemblies studied by small angle neutron scattering and x-ray diffraction. *Physical Review B*, **2005**, 72,	3.3	38

92	Applications of synchrotron X-rays in microelectronics industry research. *Nuclear Instruments & Methods in Physics Research B*, **2005**, 241, 247-252	1.2	3
91	Electrochemical and electrochromic properties of nanoworm-shaped Ta2O5–Pt thin-films. *Electrochemistry Communications*, **2005**, 7, 151-155	5.1	8
90	On the relationship of magnetocrystalline anisotropy and stoichiometry in epitaxial L10 CoPt (001) and FePt (001) thin films. *Journal of Applied Physics*, **2005**, 98, 033904	2.5	174
89	Dependence of Regioregular Poly(3-hexylthiophene) Film Morphology and Field-Effect Mobility on Molecular Weight. *Macromolecules*, **2005**, 38, 3312-3319	5.5	922
88	Templating Organosilicate Vitrification Using Unimolecular Self-Organizing Polymers: Evolution of Morphology and Nanoporosity Development with Network Formation. *Advanced Materials*, **2005**, 17, 1031-1035	24	21
87	Magnetization profile in antiferromagnetically coupled recording media. *Applied Physics Letters*, **2005**, 86, 162506	3.4	4
86	Microstructural comparisons of ultrathin Cu films deposited by ion-beam and dc-magnetron sputtering. *Journal of Applied Physics*, **2005**, 97, 093301	2.5	15
85	Coverage effects on the magnetism of Fe–MgO(001) ultrathin films. *Physical Review B*, **2005**, 71,	3.3	46
84	Stoichiometry–anisotropy connections in epitaxial L10 FePt(001) films. *Journal of Applied Physics*, **2004**, 95, 7501-7503	2.5	31
83	Origin of low-friction behavior in graphite investigated by surface x-ray diffraction. *Applied Physics Letters*, **2004**, 84, 4702-4704	3.4	69
82	Structural and magnetic model of self-assembled FePt nanoparticle arrays. *Journal of Applied Physics*, **2004**, 96, 1197-1201	2.5	41
81	Supercritical CO2 extraction of porogen phase: An alternative route to nanoporous dielectrics. *Journal of Materials Research*, **2004**, 19, 3224-3233	2.5	15
80	Pore morphologies in disordered nanoporous thin films. *Langmuir*, **2004**, 20, 1535-8	4	17
79	Silicide formation and particle size growth in high-temperature-annealed, self-assembled FePt nanoparticles. *Journal of Applied Physics*, **2004**, 95, 6738-6740	2.5	31
78	Structural characterization of a pentacene monolayer on an amorphous SiO2 substrate with grazing incidence x-ray diffraction. *Journal of the American Chemical Society*, **2004**, 126, 4084-5	16.4	392
77	Reduction of resistivity in Cu thin films by partial oxidation: Microstructural mechanisms. *Applied Physics Letters*, **2004**, 84, 2518-2520	3.4	9
76	Ion Beam Stabilization of FePt Nanoparticle Arrays for Magnetic Storage Media. *Materials Research Society Symposia Proceedings*, **2003**, 777, 651		1
75	Thickness and growth temperature dependence of structure and magnetism in FePt thin films. *Journal of Applied Physics*, **2003**, 93, 9902-9907	2.5	96

74	X-ray studies of magnetic nanoparticle assemblies. *Journal of Applied Physics*, **2003**, 93, 7343-7345	2.5	29
73	X-ray absorption and diffraction studies of thin polymer/FePt nanoparticle assemblies. *Journal of Applied Physics*, **2003**, 93, 6299-6304	2.5	32
72	Nanoscale phase separation in Fe3O4(111) films on sapphire(0001) and phase stability of Fe3O4(001) films on MgO(001) grown by oxygen-plasma-assisted molecular beam epitaxy. *Journal of Applied Physics*, **2003**, 93, 5626-5636	2.5	19
71	High anisotropy CoPtCrB magnetic recording media. *Journal of Applied Physics*, **2003**, 94, 4018-4023	2.5	17
70	Supercritical carbon dioxide extraction of porogens for the preparation of ultralow-dielectric-constant films. *Applied Physics Letters*, **2003**, 82, 4328-4330	3.4	24
69	Small-angle neutron scattering measurements of magnetic cluster sizes in magnetic recording disks. *Applied Physics Letters*, **2003**, 82, 3050-3052	3.4	14
68	Elastic properties of chemically ordered Co3Pt thin films. *Journal of Applied Physics*, **2002**, 91, 2737-2741	2.5	12
67	Pore size distributions in nanoporous methyl silsesquioxane films as determined by small angle x-ray scattering. *Applied Physics Letters*, **2002**, 81, 2232-2234	3.4	67
66	Spontaneous chemical ordering and exchange bias in epitaxial Mn0.52Pd0.48/Fe(001) bilayers prepared at room temperature. *Applied Physics Letters*, **2002**, 80, 808-810	3.4	13
65	Temperature dependent magnetic properties of highly chemically ordered Fe55□NixPt45L10 films. *Journal of Applied Physics*, **2002**, 91, 6595	2.5	219
64	Thickness dependence of exchange bias and structure in MnPt and MnNi spin valves. *Applied Physics Letters*, **2002**, 81, 4565-4567	3.4	37
63	Oxygen-enhanced IrMn spin valves deposited by ion-beam and magnetron sputtering. *Journal of Applied Physics*, **2001**, 89, 6925-6927	2.5	6
62	Thickness Measurements of Thin Perfluoropolyether Polymer Films on Silicon and Amorphous-Hydrogenated Carbon with X-Ray Reflectivity, ESCA and Optical Ellipsometry. *Journal of Colloid and Interface Science*, **2000**, 225, 219-226	9.3	43
61	Direct observation of the alignment of ferromagnetic spins by antiferromagnetic spins. *Nature*, **2000**, 405, 767-9	50.4	407
60	Temperature dependent chemical ordering in FePt(001) and FePt(110) films. *Journal of Applied Physics*, **2000**, 87, 6956-6958	2.5	23
59	Roughness of molecularly thin perfluoropolyether polymer films. *Applied Physics Letters*, **2000**, 77, 3296-3298	3.4	18
58	The Structure of the Passive Film That Forms on Iron in Aqueous Environments. *Journal of the Electrochemical Society*, **2000**, 147, 2162	3.9	200
57	In Situ X-Ray-Diffraction Studies of Passive Oxide Films. *MRS Bulletin*, **1999**, 24, 29-35	3.2	15

56	Effects of stacking faults on magnetic viscosity in thin film magnetic recording media. *Journal of Applied Physics*, **1999**, 85, 2775-2781	2.5	46
55	10 Gbit/in.2 longitudinal media on a glass substrate (invited). *Journal of Applied Physics*, **1999**, 85, 4286-4291	2.5	70
54	Metal Oxide Surfaces and Their Interactions with Aqueous Solutions and Microbial Organisms. *Chemical Reviews*, **1999**, 99, 77-174	68.1	882
53	Low-Dielectric, Nanoporous Organosilicate Films Prepared via Inorganic/Organic Polymer Hybrid Templates. *Chemistry of Materials*, **1999**, 11, 3080-3085	9.6	191
52	Perpendicular magnetic anisotropy and magnetic domain structure in sputtered epitaxial FePt (001) L10 films. *Journal of Applied Physics*, **1998**, 84, 5686-5692	2.5	257
51	X-ray scattering studies of the passive oxide film formed on iron. *Synchrotron Radiation News*, **1998**, 11, 5-11	0.6	1
50	Magnetic anisotropy and microstructure in molecular beam epitaxial FePt (110)/MgO (110). *Journal of Applied Physics*, **1998**, 84, 934-939	2.5	66
49	Thickness Dependent Perpendicular Magnetic Domain Patterns in Sputtered Epitaxial FePt (001) L10 Films. *Materials Research Society Symposia Proceedings*, **1998**, 517, 319		4
48	Atomic Structure of the Passive Oxide Film Formed on Iron. *Physical Review Letters*, **1997**, 79, 4282-4285	7.4	166
47	Growth temperature dependence of long-range alloy order and magnetic properties of epitaxial FexPt1 (x?0.5) films. *Applied Physics Letters*, **1996**, 69, 1166-1168	3.4	133
46	Near Surface Structure of Solvent-free Processed Polyimide Thin Film. *Langmuir*, **1996**, 12, 2802-2806	4	30
45	Control of the axis of chemical ordering and magnetic anisotropy in epitaxial FePt films. *Journal of Applied Physics*, **1996**, 79, 5967	2.5	245
44	Near-surface alignment of polymers in rubbed films. *Nature*, **1995**, 374, 709-711	50.4	332
43	MBE Growth of Artificially-Layered Magnetic Metal Structures **1995**, 623-668		
42	Distribution of water molecules at Ag(111)/electrolyte interface as studied with surface X-ray scattering. *Surface Science*, **1995**, 335, 326-332	1.8	149
41	Electrochemical deposition of copper on a gold electrode in sulfuric acid: resolution of the interfacial structure. *Physical Review Letters*, **1995**, 75, 4472-4475	7.4	177
40	Giant magnetoresistance at low fields in [(NixFe1)yAg1]/Ag multilayers prepared by molecular-beam epitaxy. *Journal of Applied Physics*, **1994**, 76, 3688-3694	2.5	20
39	Comment on "Superstructures of Pb monolayers electrochemically deposited on Ag(111)". *Physical Review B*, **1994**, 49, 7793-7794	3.3	15

38	Voltage-dependent ordering of water molecules at an electrode□electrolyte interface. *Nature*, **1994**, 368, 444-446	50.4	491
37	X-ray diffraction from anodic TiO2 films: in situ and ex situ comparison of the Ti (0001) face. *Surface Science*, **1994**, 302, 341-349	1.8	9
36	Studies of Electrodes by in Situ X-Ray Scattering **1994**, 109-125		10
35	Giant magnetoresistance and Co-cluster structure in phase-separated Co-Cu granular alloys. *Physical Review B*, **1993**, 48, 16810-16813	3.3	76
34	Grazing incidence x-ray scattering studies of thin films of an aromatic polyimide. *Macromolecules*, **1993**, 26, 2847-2859	5.5	117
33	Atomic structure at electrode interfaces. *Synchrotron Radiation News*, **1993**, 6, 28-33	0.6	28
32	Giant Magnetoresistance in As-Grown Epitaxial Films of Phase-Separated Co-Cu and Co-Ag. *Europhysics Letters*, **1993**, 22, 455-462	1.6	54
31	Magneto-optical Kerr spectroscopy of a new chemically ordered alloy: Co3Pt. *Physical Review Letters*, **1993**, 71, 2493-2496	7.4	175
30	Growth temperature dependence of magnetoresistance in Co/Cu(111) wedged superlattices. *Physical Review B*, **1993**, 47, 8721-8733	3.3	52
29	Instrumental effects on measurements of surface X-ray diffraction rods: resolution function and active sample area. *Acta Crystallographica Section A: Foundations and Advances*, **1993**, 49, 624-642		20
28	XRD: X-Ray Diffraction **1992**, 198-213		5
27	Underpotentially deposited thallium on silver (111) by in situ surface x-ray scattering. *Physical Review B*, **1992**, 45, 9362-9374	3.3	63
26	Structure and epitaxy of anodic TiO2/Ti(110). *Surface Science*, **1992**, 268, 57-72	1.8	14
25	In-situ surface x-ray scattering of metal monolayers adsorbed at solid-liquid interfaces **1991**, 1550, 140		6
24	Surface-induced ordering of an aromatic polyimide. *Physical Review Letters*, **1991**, 66, 1181-1184	7.4	94
23	Thermal annealing study of exchange-biased NiFe-FeMn films. *Journal of Applied Physics*, **1991**, 70, 6227-6229	2.5	42
22	Synchrotron x-ray diffraction studies of the lattice and magnetic structure of epitaxial Dy films in LaF3/Dy/LaF3 sandwiches. *Journal of Applied Physics*, **1991**, 70, 4465-4468	2.5	6
21	In situ surface x-ray scattering measurements of electrochemically deposited bismuth on silver(111): structure, compressibility, and comparison with ex situ low-energy electron diffraction measurements. *Langmuir*, **1991**, 7, 796-802	4	51

20	Surface x-ray-scattering measurements of the substrate-induced spatial modulation of an incommensurate adsorbed monolayer. *Physical Review B*, **1990**, 42, 5594-5603	3.3	62
19	X-ray reflectivity on perfluoropolyether polymer molecules on amorphous carbon. *Journal of Chemical Physics*, **1990**, 92, 3781-3793	3.9	50
18	Structural depth profiling of iron oxide thin films using grazing incidence asymmetric Bragg x-ray diffraction. *Journal of Applied Physics*, **1989**, 65, 4763-4768	2.5	28
17	Measurements of carbon thin films using x-ray reflectivity. *Journal of Applied Physics*, **1989**, 66, 1861-1863	2.5	69
16	Observation of the effect of refraction on x rays diffracted in a grazing-incidence asymmetric Bragg geometry. *Physical Review B*, **1989**, 39, 7963-7966	3.3	70
15	Grazing incidence x-ray diffraction of lead monolayers at a silver (111) and gold (111) electrode/electrolyte interface. *The Journal of Physical Chemistry*, **1988**, 92, 220-225		142
14	In-situ grazing incidence X-ray diffraction study of electrochemically deposited Pb monolayers on Ag(111). *Surface Science*, **1988**, 193, L29-L36	1.8	92
13	Two-dimensional compressibility of electrochemically adsorbed lead on silver (111). *Physical Review B*, **1988**, 38, 10962-10965	3.3	69
12	X-ray depth profiling of iron oxide thin films. *Journal of Materials Research*, **1988**, 3, 351-356	2.5	90
11	In Situ X-Ray Scattering of Monolayers Adsorbed at Electrochemical Interfaces.. *Materials Research Society Symposia Proceedings*, **1988**, 143, 37		1
10	Low-energy electron diffraction study of molecular oxygen physisorbed on graphite. *Physical Review B*, **1987**, 36, 1248-1258	3.3	58
9	Low-energy electron diffraction determination of the structure of the □phase of oxygen physisorbed on graphite. *Physical Review B*, **1984**, 30, 1115-1118	3.3	47
8	Summary Abstract: Low-energy electron diffraction study of the phases and phase transitions of oxygen physisorbed on graphite. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **1984**, 2, 898-898	2.9	2
7	Rotational epitaxy of a nontriangular structure: The □phase of oxygen physisorbed on graphite. *Physical Review B*, **1983**, 27, 6413-6417	3.3	55
6	Orientational Ordering of Nitrogen Molecular Axes for a Commensurate Monolayer Physisorbed on Graphite. *Physical Review Letters*, **1982**, 48, 177-180	7.4	122
5	Manipulation and statistical analysis of the fluid flow of polymer semiconductor solutions during meniscus-guided coating. *MRS Bulletin*,1-14	3.2	
4	Improving molecular alignment and charge percolation in semiconducting polymer films with highly localized electronic states through tailored thermal annealing. *Journal of Materials Chemistry C*,	7.1	2
3	Compositional heterogeneity in CsyFA1□Pb(BrxI1□)3 perovskite films and its impact on phase behavior. *Energy and Environmental Science*,	35.4	7

2	Water or Anion? Uncovering the Zn2+ Solvation Environment in Mixed Zn(TFSI)2 and LiTFSI Water-in-Salt Electrolytes. *ACS Energy Letters*,3458-3463	20.1	5
1	Twisted A-D-A Type Acceptors with Thermally-Activated Delayed Crystallization Behavior for Efficient Nonfullerene Organic Solar Cells. *Advanced Energy Materials*,2103957	21.8	0