

Derrick M Mott

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

107
papers

5,183
citations

38
h-index

71
g-index

115
ext. papers

5,555
ext. citations

4.9
avg, IF

5.12
L-index

#	Paper	IF	Citations
107	Organic nanocrystal enrichment in paper microfluidic analysis. <i>Sensors and Actuators B: Chemical</i> , 2021 , 333, 129548	8.5	5
106	Surface oxygenation of multicomponent nanoparticles toward active and stable oxidation catalysts. <i>Nature Communications</i> , 2020 , 11, 4201	17.4	9
105	Synthesis and Characterization of Copper Sulfide-Manganese Sulfide Nanoparticles with Chestnut Morphology and Study on the Semiconducting Properties. <i>ChemistrySelect</i> , 2019 , 4, 3898-3904	1.8	1
104	Colloid Chemical Approach for Fabricating Cu ₂ Sn _{1-x} Zn _x S ₃ Nanobulk Thermoelectric Materials by Blending Cu ₂ S and FeS Nanoparticles as Building Blocks. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 3688-3697	3.9	4
103	Evolution of surface catalytic sites on thermochemically-tuned gold-palladium nanoalloys. <i>Nanoscale</i> , 2018 , 10, 3849-3862	7.7	4
102	Silver nanoparticle loaded TiO ₂ nanotubes with high photocatalytic and antibacterial activity synthesized by photoreduction method. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2018 , 352, 106-112	4.7	65
101	Enhancement of the Thermoelectric Figure of Merit in Blended Cu ₂ Sn _{1-x} Zn _x S ₃ Nanobulk Materials. <i>ACS Applied Nano Materials</i> , 2018 , 1, 4819-4827	5.6	10
100	Catalytic oxidation of propane over palladium alloyed with gold: an assessment of the chemical and intermediate species. <i>Catalysis Science and Technology</i> , 2018 , 8, 6228-6240	5.5	8
99	Plasmonic-magnetic dual-functional graded nanoparticles with oxide shell passivation designed for bioapplications. <i>Applied Physics Express</i> , 2018 , 11, 105001	2.4	
98	AuFePt Ternary Homogeneous Alloy Nanoparticles with Magnetic and Plasmonic Properties. <i>Langmuir</i> , 2017 , 33, 1687-1694	4	11
97	Comparative trial of saccharin-added electrolyte for improving the structure of an electrodeposited magnetic FeCoNi thin film. <i>Thin Solid Films</i> , 2017 , 642, 51-57	2.2	16
96	Sustainable thermoelectric materials fabricated by using Cu ₂ Sn _{1-x} Zn _x S ₃ nanoparticles as building blocks. <i>Applied Physics Letters</i> , 2017 , 111, 263105	3.4	12
95	Ultrafast Exciton Dynamics in Cd _x Hg _(1-x) Te alloy Quantum Dots. <i>Chemical Physics</i> , 2016 , 469-470, 25-30	2.3	5
94	Doxorubicin loaded dual pH- and thermo-responsive magnetic nanocarrier for combined magnetic hyperthermia and targeted controlled drug delivery applications. <i>Nanoscale</i> , 2016 , 8, 12152-61	7.7	141
93	Copper Sulfide-zinc Sulfide Janus Nanoparticles and Their Seebeck Characteristics for Sustainable Thermoelectric Materials. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 5869-5875	3.8	18
92	Exchange bias in Ag/FeCo/Ag core/shell/shell nanoparticles due to partial oxidation of FeCo intermediate shell. <i>Journal of Magnetism and Magnetic Materials</i> , 2016 , 401, 339-344	2.8	14
91	Characterization of Metallic Nanoparticles Based on the Abundant Usages of X-ray Techniques 2016 , 217-244		

90	Preparation of PdCu Alloy Nanocatalysts for Nitrate Hydrogenation and Carbon Monoxide Oxidation. <i>Catalysts</i> , 2016 , 6, 96	4	23
89	Quantitative two-dimensional strain mapping of small core-shell FePt@Fe ₃ O ₄ nanoparticles. <i>New Journal of Physics</i> , 2016 , 18, 033016	2.9	4
88	Transition of exchange bias from the linear to oscillatory regime with the progression of surface oxidation of Ag@FeCo@Ag core-shell nanoparticles. <i>Journal of Applied Physics</i> , 2016 , 120, 134301	2.5	3
87	Synthesis and surface functionalization of Fe ₃ O ₄ -SiO ₂ core-shell nanoparticles with 3-glycidoxypropyltrimethoxysilane and 1,2-carbonyldiimidazole for bio-applications. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2016 , 504, 376-383	5.1	55
86	Characterization of Metallic Nanoparticles Based on the Abundant Usages of X-ray Techniques 2015 , 1-24		2
85	Catalytic activity of bimetallic catalysts highly sensitive to the atomic composition and phase structure at the nanoscale. <i>Nanoscale</i> , 2015 , 7, 18936-48	7.7	47
84	Harvesting Nanocatalytic Heat Localized in Nanoalloy Catalyst as a Heat Source in a Nanocomposite Thin Film Thermoelectric Device. <i>Langmuir</i> , 2015 , 31, 11158-63	4	1
83	Chalcopyrite Nanoparticles as a Sustainable Thermoelectric Material. <i>Nanomaterials</i> , 2015 , 5, 1820-1830	5.4	5
82	Formation mechanism of magnetic plasmonic Ag@FeCo@Ag core-shell nanoparticles: fact is more interesting than fiction. <i>CrystEngComm</i> , 2015 , 17, 6923-6929	3.3	19
81	Nanoparticle Building Blocks as a Foundation for Advanced Thermoelectric Energy Generators. <i>ACS Symposium Series</i> , 2015 , 41-54	0.4	1
80	Ag/FeCo/Ag core/shell/shell magnetic nanoparticles with plasmonic imaging capability. <i>Langmuir</i> , 2015 , 31, 2228-36	4	30
79	Novel nickel-palladium catalysts encased in a platinum nanocage. <i>RSC Advances</i> , 2014 , 4, 26667-26672	3.7	10
78	Multicore magnetic FePt nanoparticles: controlled formation and properties. <i>RSC Advances</i> , 2014 , 4, 1039-1044	3.7	16
77	Chemical Synthesis of Binary Solid Solution Bismuth-Antimony Nanoparticles with Control of Composition and Morphology. <i>Chemistry Letters</i> , 2014 , 43, 615-617	1.7	2
76	FePt Nanoparticles as Promising Magnetic Nanobeads for Biomedical Applications. <i>Funtai Oyobi Fumatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy</i> , 2014 , 61, S104-S110	0.2	0
75	Chalcopyrite nanocomposite material for sustainable thermoelectrics. <i>Japanese Journal of Applied Physics</i> , 2014 , 53, 120301	1.4	8
74	Magnetic Plasmonic FePt@Ag Core-Shell Nanoparticles and Their Magnetic and SERS Properties. <i>Plasmonics</i> , 2013 , 8, 1177-1184	2.4	16
73	Catalytic and electrocatalytic oxidation of ethanol over palladium-based nanoalloy catalysts. <i>Langmuir</i> , 2013 , 29, 9249-58	4	75

72	Gold/Wetite core-shell nanoparticles: suppression of iron oxidation through the electron-transfer phenomenon. <i>ChemPhysChem</i> , 2013 , 14, 3278-83	3.2	5
71	Oxophilicity and Structural Integrity in Maneuvering Surface Oxygenated Species on Nanoalloys for CO Oxidation. <i>ACS Catalysis</i> , 2013 , 3, 3075-3085	13.1	24
70	Bifunctional nanoparticles for SERS monitoring and magnetic intervention of assembly and enzyme cutting of DNAs. <i>Journal of Materials Chemistry B</i> , 2013 , 1, 4320-4330	7.3	23
69	Chemical synthesis of blue-emitting metallic zinc nano-hexagons. <i>CrystEngComm</i> , 2013 , 15, 6606	3.3	48
68	Attenuation of surface-enhanced Raman scattering of magnetic plasmonic FePt@Ag core-shell nanoparticles due to an external magnetic field. <i>Chemical Physics Letters</i> , 2013 , 574, 94-99	2.5	5
67	Enhanced electronic properties of Pt@Ag heterostructured nanoparticles. <i>Sensors</i> , 2013 , 13, 7813-26	3.8	16
66	Wet-chemical preparation of digold bismuthide, gold diantimonide, and gold ditelluride particles. <i>Journal of Materials Research</i> , 2013 , 28, 2106-2112	2.5	2
65	An influence of bottom electrode material on electrical conduction and resistance switching of TiO _x thin films. <i>EPJ Applied Physics</i> , 2013 , 64, 30102	1.1	5
64	Boehmite nanorod/gold nanoparticle nanocomposite film for an easy-to-use optical humidity sensor. <i>Sensors and Actuators B: Chemical</i> , 2012 , 168, 429-435	8.5	21
63	One-pot Chemical Synthesis of Zinc Antimonide Nanoparticles as Building Blocks for Nanostructured Thermoelectric Materials. <i>Chemistry Letters</i> , 2012 , 41, 1529-1531	1.7	5
62	Manipulation of the Electronic Properties of Gold and Silver Core-shell Nanoparticles. <i>ACS Symposium Series</i> , 2012 , 327-358	0.4	
61	Electronic transfer as a route to increase the chemical stability in gold and silver core-shell nanoparticles. <i>Advances in Colloid and Interface Science</i> , 2012 , 185-186, 14-33	14.3	43
60	Gold-Copper Nanoparticles: Nanostructural Evolution and Bifunctional Catalytic Sites. <i>Chemistry of Materials</i> , 2012 , 24, 4662-4674	9.6	75
59	Nanoscale alloying effect of gold-platinum nanoparticles as cathode catalysts on the performance of a rechargeable lithium-oxygen battery. <i>Nanotechnology</i> , 2012 , 23, 305404	3.4	36
58	X-ray Absorption Near-Edge Structure and X-ray Photoelectron Spectroscopy Studies of Interfacial Charge Transfer in Gold-Silver-Gold Double-Shell Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 4511-4516	3.8	59
57	Anisotropic Nanoparticles for Efficient Thermoelectric Devices 2012 , 521-543		
56	MicroRNA conjugated gold nanoparticles and cell transfection. <i>Analytical Chemistry</i> , 2012 , 84, 26-9	7.8	63
55	Peak shape analysis of Ag 3d core-level X-ray photoelectron spectra of Au@Ag core-shell nanoparticles using an asymmetric Gaussian-Lorentzian mixed function. <i>Surface and Interface Analysis</i> , 2012 , 44, 1611-1614	1.5	11

54	Chemical stabilization of gold coated by silver core-shell nanoparticles via electron transfer. <i>Nanotechnology</i> , 2012 , 23, 245704	3.4	45
53	Synthesis, Fabrication, and Characterization of Multidimensional Nanoparticle Based Thermoelectric Materials Composed of Bismuth, Antimony, and Tellurium.. <i>Materials Research Society Symposia Proceedings</i> , 2011 , 1329, 1		
52	Nanoengineered PtCo and PtNi Catalysts for Oxygen Reduction Reaction: An Assessment of the Structural and Electrocatalytic Properties. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 1682-1694	3.8	157
51	Synthesis of delafossite CuAlO ₂ p-type semiconductor with a nanoparticle-based Cu(I) acetate-loaded boehmite precursor. <i>Materials Research Bulletin</i> , 2011 , 46, 1819-1827	5.1	20
50	Bismuth, antimony and tellurium alloy nanoparticles with controllable shape and composition for efficient thermoelectric devices. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2011 , 208, 52-58	1.6	17
49	Study on formation mechanism and ligand-directed architectural control of nanoparticles composed of Bi, Sb and Te: towards one-pot synthesis of ternary (Bi,Sb) ₂ Te ₃ nanobuilding blocks. <i>RSC Advances</i> , 2011 , 1, 1089	3.7	11
48	One-pot synthesis and characterization of well defined core-shell structure of FePt@CdSe nanoparticles. <i>RSC Advances</i> , 2011 , 1, 100	3.7	23
47	Rigid, conjugated and shaped arylethyne as mediators for the assembly of gold nanoparticles. <i>Journal of Materials Chemistry</i> , 2011 , 21, 1890-1901		25
46	Charge-transfer-induced suppression of galvanic replacement and synthesis of (Au@Ag)@Au double shell nanoparticles for highly uniform, robust and sensitive bioprobes. <i>Applied Physics Letters</i> , 2011 , 99, 073107	3.4	41
45	Elucidation of the Complex Structure of Nanoparticles Composed of Bismuth, Antimony, and Tellurium Using Scanning Transmission Electron Microscopy. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 17334-17340	3.8	7
44	Role of base in the formation of silver nanoparticles synthesized using sodium acrylate as a dual reducing and encapsulating agent. <i>Physical Chemistry Chemical Physics</i> , 2011 , 13, 9335-43	3.6	71
43	Gold-platinum nanoparticles: alloying and phase segregation. <i>Journal of Materials Chemistry</i> , 2011 , 21, 4012-4020		113
42	Intensification of surface enhanced Raman scattering of thiol-containing molecules using Ag@Au core@shell nanoparticles. <i>Journal of Applied Physics</i> , 2011 , 109, 094301	2.5	25
41	Low-temperature phase and morphology transformations in noble metal nanocatalysts. <i>Nanotechnology</i> , 2011 , 22, 025701	3.4	9
40	A Study on the Plasmonic Properties of Silver Core Gold Shell Nanoparticles: Optical Assessment of the Particle Structure. <i>Japanese Journal of Applied Physics</i> , 2011 , 50, 065004	1.4	9
39	High-performance nonvolatile write-once-read-many-times memory devices with ZnO nanoparticles embedded in polymethylmethacrylate. <i>Applied Physics Letters</i> , 2011 , 99, 233303	3.4	22
38	True Atomic Level Imaging of Shaped Nanoparticles Composed of Bismuth, Antimony and Tellurium using Scanning Transmission Electron Microscopy.. <i>Materials Research Society Symposia Proceedings</i> , 2011 , 1349, 140201		
37	A Study on the Plasmonic Properties of Silver Core Gold Shell Nanoparticles: Optical Assessment of the Particle Structure. <i>Japanese Journal of Applied Physics</i> , 2011 , 50, 065004	1.4	5

- 36 Synthesis of Size and Shape Controlled Silver Nanoparticles Coated by a Thin Layer of Gold and Their Use as Ultrasensitive Biomolecular Probes. *Materials Research Society Symposia Proceedings*, **2010**, 1253, 4
- 35 Assembly of Ag@Au Nanoparticles Using Complementary Stranded DNA Molecules and Their Detection Using UV-Vis and RAMAN Spectroscopic Techniques. *Materials Research Society Symposia Proceedings*, **2010**, 1272, 1
- 34 Design and Synthesis of One and Two Dimensional Thermoelectric Nanomaterials Composed of Bismuth, Antimony, and Tellurium. *Materials Research Society Symposia Proceedings*, **2010**, 1267, 1
- 33 From Ultrafine Thiolate-Capped Copper Nanoclusters toward Copper Sulfide Nanodiscs: A Thermally Activated Evolution Route. *Chemistry of Materials*, **2010**, 22, 261-271 9.6 73
- 32 Nanoscale Alloying, Phase-Segregation, and Core/Shell Evolution of Gold/Platinum Nanoparticles and Their Electrocatalytic Effect on Oxygen Reduction Reaction. *Chemistry of Materials*, **2010**, 22, 4282-4294 9.6 184
- 31 Aqueous synthesis and characterization of Ag and Ag-Au nanoparticles: addressing challenges in size, monodispersity and structure. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2010**, 368, 4275-92 3 47
- 30 Thermal Treatment of PtNiCo Electrocatalysts: Effects of Nanoscale Strain and Structure on the Activity and Stability for the Oxygen Reduction Reaction. *Journal of Physical Chemistry C*, **2010**, 114, 17580-17590 3.8 84
- 29 Chromium-assisted synthesis of platinum nanocube electrocatalysts. *Chemical Communications*, **2010**, 46, 7184-6 5.8 41
- 28 Molecularly-mediated assembly of gold nanoparticles with interparticle rigid, conjugated and shaped aryl ethynyl structures. *Chemical Communications*, **2010**, 46, 2218-20 5.8 15
- 27 An in situ real-time x-ray diffraction study of phase segregation in Au-Pt nanoparticles. *Nanotechnology*, **2009**, 20, 245708 3.4 26
- 26 Nanostructured PtVFe catalysts: Electrocatalytic performance in proton exchange membrane fuel cells. *Electrochemistry Communications*, **2009**, 11, 1139-1141 5.1 39
- 25 Interparticle chiral recognition of enantiomers: a nanoparticle-based regulation strategy. *Analytical Chemistry*, **2009**, 81, 689-98 7.8 77
- 24 Synthesis, characterization and potential application of MnZn ferrite and MnZn ferrite @ Au nanoparticles. *Journal of Nanoscience and Nanotechnology*, **2009**, 9, 3005-12 1.3 26
- 23 Fuel cell technology: nano-engineered multimetallic catalysts. *Energy and Environmental Science*, **2008**, 1, 454 35.4 133
- 22 Gold and magnetic oxide/gold core/shell nanoparticles as bio-functional nanoprobes. *Nanotechnology*, **2008**, 19, 305102 3.4 72
- 21 Core@shell nanomaterials: gold-coated magnetic oxide nanoparticles. *Journal of Materials Chemistry*, **2008**, 18, 2629 169
- 20 Interparticle interactions in glutathione mediated assembly of gold nanoparticles. *Langmuir*, **2008**, 24, 8857-63 4 133
- 19 Combinatorial Assessment of the Activity-Composition Correlation for Several Alloy Nanoparticle Catalysts. *Industrial & Engineering Chemistry Research*, **2008**, 47, 4675-4682 3.9 5

18	Characterization of the detector subsystem for the near-infrared spectrograph (NIRSpec) on the James Webb Space Telescope 2008 ,		2
17	Core/Shell Nanoparticles as Electrocatalysts for Fuel Cell Reactions. <i>Advanced Materials</i> , 2008 , 20, 4342-4347	4.47	215
16	Size Determination of Nanoparticles Based on Tapping-Mode Atomic Force Microscopy Measurements. <i>Journal of Scanning Probe Microscopy</i> , 2008 , 3, 1-8		7
15	Assembly of gold nanoparticles mediated by multifunctional fullerenes. <i>Langmuir</i> , 2007 , 23, 10715-24	4	30
14	Gold-Based Nanoparticle Catalysts for Fuel Cell Reactions 2007 , 289-307		8
13	Synthesis of size-controlled and shaped copper nanoparticles. <i>Langmuir</i> , 2007 , 23, 5740-5	4	399
12	Size Correlation of Optical and Spectroscopic Properties for Gold Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 14664-14669	3.8	464
11	Nanocrystal and surface alloy properties of bimetallic Gold-Platinum nanoparticles. <i>Nanoscale Research Letters</i> , 2007 , 2, 12-16	5	72
10	Synergistic activity of gold-platinum alloy nanoparticle catalysts. <i>Catalysis Today</i> , 2007 , 122, 378-385	5.3	198
9	Homocysteine-mediated reactivity and assembly of gold nanoparticles. <i>Langmuir</i> , 2007 , 23, 826-33	4	127
8	Adsorption of cyanine dyes on gold nanoparticles and formation of J-aggregates in the nanoparticle assembly. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 6673-82	3.4	116
7	Ternary alloy nanoparticles with controllable sizes and composition and electrocatalytic activity. <i>Journal of Materials Chemistry</i> , 2006 , 16, 1665		89
6	Characterization of carbon-supported AuPt nanoparticles for electrocatalytic methanol oxidation reaction. <i>Langmuir</i> , 2006 , 22, 2892-8	4	250
5	Sensing Arrays Constructed from Nanoparticle Thin Films and Interdigitated Microelectrodes. <i>Sensors</i> , 2006 , 6, 667-679	3.8	27
4	Phase Properties of Carbon-Supported GoldPlatinum Nanoparticles with Different Bimetallic Compositions. <i>Chemistry of Materials</i> , 2005 , 17, 3086-3091	9.6	219
3	Synthesis and Characterization of Monolayer-Capped PtVFe Nanoparticles with Controllable Sizes and Composition. <i>Chemistry of Materials</i> , 2005 , 17, 5282-5290	9.6	75
2	Nanoparticle-structured sensing array materials and pattern recognition for VOC detection. <i>Sensors and Actuators B: Chemical</i> , 2005 , 106, 431-441	8.5	78
1	Silica-Supported Au and Pt Nanoparticles and CO Adsorption. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 900, 1		

