

Igor I Slowing

List of Publications by Year in descending order

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100
papers

14,325
citations

81434

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42259

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all docs

105
docs citations

105
times ranked

18896
citing authors

#	ARTICLE	IF	CITATIONS
1	Surface ligands enhance the catalytic activity of supported Au nanoparticles for the aerobic β -oxidation of amines to amides. <i>Catalysis Science and Technology</i> , 2022, 12, 1922-1933.	2.1	10
2	Determining the Three-Dimensional Structures of Silica-Supported Metal Complexes from the Ground Up. <i>Inorganic Chemistry</i> , 2022, 61, 1067-1078.	1.9	8
3	In Situ ^{29}Si solid-state NMR study of grafting of organoalkoxysilanes to mesoporous silica nanoparticles. <i>Microporous and Mesoporous Materials</i> , 2022, 339, 112019.	2.2	6
4	Modeling of linear nanopores in α - SiO_2 tuning pore surface structure. <i>Microporous and Mesoporous Materials</i> , 2022, , 112077.	2.2	0
5	Regulating the Catalytic Activity of Pd Nanoparticles by Confinement in Ordered Mesoporous Supports. <i>ChemCatChem</i> , 2021, 13, 539-542.	1.8	9
6	Catalytic carbon-carbon bond cleavage and carbon-element bond formation give new life for polyolefins as biodegradable surfactants. <i>CheM</i> , 2021, 7, 1347-1362.	5.8	50
7	Non-Innocent Role of the Ceria Support in Pd-Catalyzed Halophenol Hydrodehalogenation. <i>ACS Catalysis</i> , 2021, 11, 10553-10564.	5.5	10
8	Silica-Supported Organolanthanum Catalysts for C=O Bond Cleavage in Epoxides. <i>Journal of the American Chemical Society</i> , 2020, 142, 2935-2947.	6.6	23
9	Macroscopic Control of Reactivity using 3D Printed Materials with Intrinsic Catalytic Properties. <i>Applied Catalysis A: General</i> , 2020, 605, 117794.	2.2	5
10	Catalytic upcycling of high-density polyethylene via a processive mechanism. <i>Nature Catalysis</i> , 2020, 3, 893-901.	16.1	262
11	An organogel library for solution NMR analysis of nanoparticle suspensions in non-aqueous samples. <i>Journal of Magnetic Resonance</i> , 2020, 321, 106874.	1.2	3
12	Substrate-Support Interactions Mediate Hydrogenation of Phenolic Compounds by Pd/CeO ₂ Nanorods. <i>ACS Applied Nano Materials</i> , 2020, 3, 11282-11288.	2.4	10
13	Surface structure of linear nanopores in amorphous silica: Comparison of properties for different pore generation algorithms. <i>Journal of Chemical Physics</i> , 2020, 153, 124708.	1.2	4
14	Kinetics of the functionalization of mesoporous silica nanoparticles: Implications on surface group distributions, adsorption and catalysis. <i>Microporous and Mesoporous Materials</i> , 2020, 305, 110276.	2.2	12
15	β -Surface Contrast TM NMR Reveals Non-Innocent Role of Support in Pd/CeO ₂ Catalyzed Phenol Hydrogenation. <i>ChemCatChem</i> , 2020, 12, 4160-4166.	1.8	13
16	Two-step conversion of Kraft lignin to nylon precursors under mild conditions. <i>Green Chemistry</i> , 2020, 22, 4676-4682.	4.6	25
17	Control of interfacial pH in mesoporous silica nanoparticles via surface functionalization. <i>Journal of Chemical Physics</i> , 2020, 152, 034703.	1.2	17
18	Toward hydrogen economy: Selective guaiacol hydrogenolysis under ambient hydrogen pressure. <i>Applied Catalysis B: Environmental</i> , 2020, 270, 118890.	10.8	37

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19	High Throughput Screening of 3D Printable Resins: Adjusting the Surface and Catalytic Properties of Multifunctional Architectures. ACS Applied Polymer Materials, 2019, 1, 2890-2896.	2.0	14
20	Interfacial Control of Catalytic Activity in the Aldol Condensation: Combining the Effects of Hydrophobic Environments and Water. ACS Catalysis, 2019, 9, 5574-5582.	5.5	27
21	Catalytic properties of intermetallic platinum-tin nanoparticles with non-stoichiometric compositions. Journal of Catalysis, 2019, 374, 136-142.	3.1	29
22	The anomalous solidification of concrete grindings from acid treatment. Cement and Concrete Research, 2019, 116, 65-69.	4.6	1
23	Probing O-H Bonding through Proton Detected $1\text{H}\text{-}^{17}\text{O}$ Double Resonance Solid-State NMR Spectroscopy. Journal of the American Chemical Society, 2019, 141, 441-450.	6.6	37
24	Anomalous Kinetics of Catalytic Conversion Reactions in Linear Nanopores Mediated by Inhibited Transport: Multiscale Modeling. , 2019, , 173-190.		0
25	Quantitative atomic-scale structure characterization of ordered mesoporous carbon materials by solid state NMR. Carbon, 2018, 131, 102-110.	5.4	12
26	Recycled Sm-Co bonded magnet filaments for 3D printing of magnets. AIP Advances, 2018, 8, .	0.6	26
27	Direct ^{17}O dynamic nuclear polarization of single-site heterogeneous catalysts. Chemical Communications, 2018, 54, 3472-3475.	2.2	26
28	Fine-tuning the release of molecular guests from mesoporous silicas by controlling the orientation and mobility of surface phenyl substituents. Chemical Engineering Journal, 2018, 340, 73-80.	6.6	13
29	Development of a semigraphitic sulfur-doped ordered mesoporous carbon material for electroanalytical applications. Sensors and Actuators B: Chemical, 2018, 257, 347-353.	4.0	22
30	Optimal sample formulations for DNP SENS: The importance of radical-surface interactions. Current Opinion in Colloid and Interface Science, 2018, 33, 9-18.	3.4	42
31	Pore diameter dependence of catalytic activity: <i>p</i> -nitrobenzaldehyde conversion to an aldol product in amine-functionalized mesoporous silica. Journal of Chemical Physics, 2018, 149, 024101.	1.2	15
32	Spatial distribution of organic functional groups supported on mesoporous silica nanoparticles (2): a study by ^1H triple-quantum fast-MAS solid-state NMR. Physical Chemistry Chemical Physics, 2018, 20, 22203-22209.	1.3	20
33	Transfer hydrogenation over sodium-modified ceria: Enrichment of redox sites active for alcohol dehydrogenation. Journal of Catalysis, 2017, 346, 180-187.	3.1	20
34	Phosphate modified ceria as a Brønsted acidic/redox multifunctional catalyst. Journal of Materials Chemistry A, 2017, 5, 4455-4466.	5.2	39
35	$\text{H}^2\text{-SiH}$ -Containing Tris(silazido) Rare-Earth Complexes as Homogeneous and Grafted Single-Site Catalyst Precursors for Hydroamination. Organometallics, 2017, 36, 1142-1153.	1.1	25
36	Natural Abundance ^{17}O DNP...NMR Provides Precise O-H Distances and Insights into the Brønsted Acidity of Heterogeneous Catalysts. Angewandte Chemie - International Edition, 2017, 56, 9165-9169.	7.2	63

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37	Natural Abundance ¹⁷ O DNP-enhanced NMR Provides Precise O-H Distances and Insights into the Brønsted Acidity of Heterogeneous Catalysts. <i>Angewandte Chemie</i> , 2017, 129, 9293-9297.	1.6	10
38	Mechanistic Insight into Nanoparticle Surface Adsorption by Solution NMR Spectroscopy in an Aqueous Gel. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 9802-9806.	7.2	31
39	Ionic-Liquid-Assisted Microwave Synthesis of Solid Solutions of Sr _{1-x} Ba _x SnO ₃ Perovskite for Photocatalytic Applications. <i>ChemSusChem</i> , 2017, 10, 3387-3401.	3.6	40
40	Spatial distribution of organic functional groups supported on mesoporous silica nanoparticles: a study by conventional and DNP-enhanced ²⁹ Si solid-state NMR. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 1781-1789.	1.3	49
41	Homoleptic Trivalent Tris(alkyl) Rare Earth Compounds. <i>Journal of the American Chemical Society</i> , 2017, 139, 16862-16874.	6.6	22
42	Measuring Long-Range ¹³ C- ¹³ C Correlations on a Surface under Natural Abundance Using Dynamic Nuclear Polarization-Enhanced Solid-State Nuclear Magnetic Resonance. <i>Journal of Physical Chemistry C</i> , 2017, 121, 24687-24691.	1.5	21
43	Direct 3D Printing of Catalytically Active Structures. <i>ACS Catalysis</i> , 2017, 7, 7567-7577.	5.5	51
44	Mechanistic Insight into Nanoparticle Surface Adsorption by Solution NMR Spectroscopy in an Aqueous Gel. <i>Angewandte Chemie</i> , 2017, 129, 9934-9938.	1.6	14
45	Improved strategies for DNP-enhanced 2D 1H-X heteronuclear correlation spectroscopy of surfaces. <i>Solid State Nuclear Magnetic Resonance</i> , 2017, 87, 38-44.	1.5	27
46	Innentitelbild: Natural Abundance ¹⁷ O DNP-enhanced NMR Provides Precise O-H Distances and Insights into the Brønsted Acidity of Heterogeneous Catalysts (<i>Angew. Chem.</i> 31/2017). <i>Angewandte Chemie</i> , 2017, 129, 9032-9032.	1.6	0
47	Probing Surface Hydrogen Bonding and Dynamics by Natural Abundance, Multidimensional, ¹⁷ O DNP-NMR Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2016, 120, 11535-11544.	1.5	65
48	Virtual Special Issue on Catalysis at the U.S. Department of Energy's National Laboratories. <i>ACS Catalysis</i> , 2016, 6, 3227-3235.	5.5	2
49	Aerobic Oxidation of Cyclic Amines to Lactams Catalyzed by Ceria-Supported Nanogold. <i>Catalysis Letters</i> , 2016, 146, 2278-2291.	1.4	17
50	Deactivation of Ceria Supported Palladium through C-C Scission during Transfer Hydrogenation of Phenol with Alcohols. <i>Journal of Physical Chemistry C</i> , 2016, 120, 28067-28073.	1.5	13
51	Polarity Control at Interfaces: Quantifying Pseudo-solvent Effects in Nanoconfined Systems. <i>ChemPhysChem</i> , 2016, 17, 2982-2986.	1.0	25
52	Silanol-Assisted Carbinolamine Formation in an Amine-Functionalized Mesoporous Silica Surface: Theoretical Investigation by Fragmentation Methods. <i>Journal of Physical Chemistry B</i> , 2016, 120, 1660-1669.	1.2	20
53	Effects of biradical deuteration on the performance of DNP: towards better performing polarizing agents. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 65-69.	1.3	34
54	Studies of minute quantities of natural abundance molecules using 2D heteronuclear correlation spectroscopy under 100 kHz MAS. <i>Solid State Nuclear Magnetic Resonance</i> , 2015, 66-67, 56-61.	1.5	36

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55	Selective Hydrogenation of Phenol Catalyzed by Palladium on High-Surface-Area Ceria at Room Temperature and Ambient Pressure. <i>ACS Catalysis</i> , 2015, 5, 2051-2061.	5.5	120
56	Role Of CO ₂ As a Soft Oxidant For Dehydrogenation of Ethylbenzene to Styrene over a High-Surface-Area Ceria Catalyst. <i>ACS Catalysis</i> , 2015, 5, 6426-6435.	5.5	90
57	Dynamic Nuclear Polarization Solid-State NMR in Heterogeneous Catalysis Research. <i>ACS Catalysis</i> , 2015, 5, 7055-7062.	5.5	160
58	Synergistic Interaction between Oxides of Copper and Iron for Production of Fatty Alcohols from Fatty Acids. <i>ACS Catalysis</i> , 2015, 5, 6719-6723.	5.5	51
59	Mesoporous Silica-Supported Amidozirconium-Catalyzed Carbonyl Hydroboration. <i>ACS Catalysis</i> , 2015, 5, 7399-7414.	5.5	87
60	Vapor-Phase Oxidation of Benzyl Alcohol Using Manganese Oxide Octahedral Molecular Sieves (OMS-2). <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 19044-19051.	1.8	25
61	Heterogeneous Multicatalytic System for Single-Pot Oxidation and C-C Coupling Reaction Sequences. <i>Topics in Catalysis</i> , 2014, 57, 1000-1006.	1.3	11
62	Supported iron nanoparticles for the hydrodeoxygenation of microalgal oil to green diesel. <i>Journal of Catalysis</i> , 2014, 314, 142-148.	3.1	135
63	Langevin and Fokker-Planck Analyses of Inhibited Molecular Passing Processes Controlling Transport and Reactivity in Nanoporous Materials. <i>Physical Review Letters</i> , 2014, 113, 038301.	2.9	6
64	{Mo ₂₄ Fe ₁₂ } Macrocycles: Anion Templatation with Large Polyoxometalate Guests. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 10500-10504.	7.2	54
65	Bifunctional Adsorbent-Catalytic Nanoparticles for the Refining of Renewable Feedstocks. <i>ACS Catalysis</i> , 2013, 3, 2750-2758.	5.5	47
66	Analysis of sensitivity enhancement by dynamic nuclear polarization in solid-state NMR: a case study of functionalized mesoporous materials. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 5553.	1.3	76
67	Mesoporous Silica Nanoparticles Loaded with Surfactant: Low Temperature Magic Angle Spinning ¹³ C and ²⁹ Si NMR Enhanced by Dynamic Nuclear Polarization. <i>Journal of Physical Chemistry C</i> , 2013, 117, 1375-1382.	1.5	128
68	Solvent-Induced Reversal of Activities between Two Closely Related Heterogeneous Catalysts in the Aldol Reaction. <i>ACS Catalysis</i> , 2013, 3, 265-271.	5.5	54
69	Supported Hybrid Enzyme-Organocatalysts for Upgrading the Carbon Content of Alcohols. <i>ACS Symposium Series</i> , 2013, , 261-271.	0.5	4
70	Conversion Reactions in Surface-Functionalized Mesoporous Materials: Effect of Restricted Transport and Catalytic Site Distribution. <i>Materials Research Society Symposia Proceedings</i> , 2012, 1423, 19.	0.1	1
71	Functional Mesoporous Silica Nanoparticles for the Selective Sequestration of Free Fatty Acids from Microalgal Oil. <i>ACS Applied Materials & Interfaces</i> , 2012, 4, 1003-1009.	4.0	36
72	Selective Alcohol Dehydrogenation and Hydrogenolysis with Semiconductor-Metal Photocatalysts: Toward Solar-to-Chemical Energy Conversion of Biomass-Relevant Substrates. <i>Journal of Physical Chemistry Letters</i> , 2012, 3, 2798-2802.	2.1	76

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73	Ligand Conformation Dictates Membrane and Endosomal Trafficking of Arginine-Glycine-Aspartate (RGD)-Functionalized Mesoporous Silica Nanoparticles. <i>Chemistry - A European Journal</i> , 2012, 18, 7787-7792.	1.7	48
74	Tuning the Release of Anticancer Drugs from Magnetic Iron Oxide/Mesoporous Silica Core/Shell Nanoparticles. <i>ChemPlusChem</i> , 2012, 77, 48-55.	1.3	41
75	Substrate inhibition in the heterogeneous catalyzed aldol condensation: A mechanistic study of supported organocatalysts. <i>Journal of Catalysis</i> , 2012, 291, 63-68.	3.1	76
76	Using a Reactive Force Field To Correlate Mobilities Obtained from Solid-State ¹³ C NMR on Mesoporous Silica Nanoparticle Systems. <i>Journal of Physical Chemistry C</i> , 2011, 115, 16333-16339.	1.5	19
77	Ordered Mesoporous Polymer-Silica Hybrid Nanoparticles as Vehicles for the Intracellular Controlled Release of Macromolecules. <i>ACS Nano</i> , 2011, 5, 360-366.	7.3	95
78	Interplay between Anomalous Transport and Catalytic Reaction Kinetics in Single-File Nanoporous Systems. <i>ACS Catalysis</i> , 2011, 1, 751-763.	5.5	13
79	Interaction of Mesoporous Silica Nanoparticles with Human Red Blood Cell Membranes: Size and Surface Effects. <i>ACS Nano</i> , 2011, 5, 1366-1375.	7.3	493
80	Luciferase and Luciferin Co-immobilized Mesoporous Silica Nanoparticle Materials for Intracellular Biocatalysis. <i>Journal of the American Chemical Society</i> , 2011, 133, 18554-18557.	6.6	86
81	Exocytosis of Mesoporous Silica Nanoparticles from Mammalian Cells: From Asymmetric Cell-to-Cell Transfer to Protein Harvesting. <i>Small</i> , 2011, 7, 1526-1532.	5.2	84
82	Drug Delivery: Exocytosis of Mesoporous Silica Nanoparticles from Mammalian Cells: From Asymmetric Cell-to-Cell Transfer to Protein Harvesting (<i>Small</i> 11/2011). <i>Small</i> , 2011, 7, 1498-1498.	5.2	0
83	Surfactant-assisted controlled release of hydrophobic drugs using anionic surfactant templated mesoporous silica nanoparticles. <i>Biomaterials</i> , 2011, 32, 6234-6244.	5.7	74
84	Poly(lactic acid)-coated mesoporous silica nanosphere for controlled release of venlafaxine. <i>Journal of Colloid and Interface Science</i> , 2011, 360, 488-496.	5.0	41
85	Tuning the cellular uptake and cytotoxicity properties of oligonucleotide intercalator-functionalized mesoporous silica nanoparticles with human cervical cancer cells HeLa. <i>Biomaterials</i> , 2010, 31, 1325-1333.	5.7	69
86	Mesoporous Silica Nanoparticles for Intracellular Controlled Drug Delivery. <i>Small</i> , 2010, 6, 1952-1967.	5.2	907
87	Capped mesoporous silica nanoparticles as stimuli-responsive controlled release systems for intracellular drug/gene delivery. <i>Expert Opinion on Drug Delivery</i> , 2010, 7, 1013-1029.	2.4	157
88	Mesoporous silica nanoparticles: structural design and applications. <i>Journal of Materials Chemistry</i> , 2010, 20, 7924.	6.7	363
89	Mesoporous Silica Nanoparticles for Reducing Hemolytic Activity Towards Mammalian Red Blood Cells. <i>Small</i> , 2009, 5, 57-62.	5.2	465
90	Mesoporous Silica Nanoparticle-Based Double Drug Delivery System for Glucose-Responsive Controlled Release of Insulin and Cyclic AMP. <i>Journal of the American Chemical Society</i> , 2009, 131, 8398-8400.	6.6	707

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91	Cell-induced intracellular controlled release of membrane impermeable cysteine from a mesoporous silica nanoparticle-based drug delivery system. <i>Chemical Communications</i> , 2009, , 3219.	2.2	125
92	Photoinduced Intracellular Controlled Release Drug Delivery in Human Cells by Gold-Capped Mesoporous Silica Nanosphere. <i>Journal of the American Chemical Society</i> , 2009, 131, 3462-3463.	6.6	622
93	Endocytosis of a single mesoporous silica nanoparticle into a human lung cancer cell observed by differential interference contrast microscopy. <i>Analytical and Bioanalytical Chemistry</i> , 2008, 391, 2119-2125.	1.9	75
94	Mesoporous silica nanoparticles as controlled release drug delivery and gene transfection carriers†. <i>Advanced Drug Delivery Reviews</i> , 2008, 60, 1278-1288.	6.6	2,357
95	Structurally Ordered Mesoporous Carbon Nanoparticles as Transmembrane Delivery Vehicle in Human Cancer Cells. <i>Nano Letters</i> , 2008, 8, 3724-3727.	4.5	258
96	Mesoporous Silica Nanoparticles for Intracellular Delivery of Membrane-Impermeable Proteins. <i>Journal of the American Chemical Society</i> , 2007, 129, 8845-8849.	6.6	734
97	Synthesis and Functionalization of a Mesoporous Silica Nanoparticle Based on the Sol-Gel Process and Applications in Controlled Release. <i>Accounts of Chemical Research</i> , 2007, 40, 846-853.	7.6	1,027
98	Mesoporous silica nanoparticle based controlled release, drug delivery, and biosensor systems. <i>Chemical Communications</i> , 2007, , 3236.	2.2	532
99	Mesoporous Silica Nanoparticles for Drug Delivery and Biosensing Applications. <i>Advanced Functional Materials</i> , 2007, 17, 1225-1236.	7.8	1,503
100	Effect of Surface Functionalization of MCM-41-Type Mesoporous Silica Nanoparticles on the Endocytosis by Human Cancer Cells. <i>Journal of the American Chemical Society</i> , 2006, 128, 14792-14793.	6.6	779