

David Gajan

List of Publications by Year in descending order

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73
papers

4,182
citations

117625

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110387

64
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77
docs citations

77
times ranked

3533
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Surface Enhanced NMR Spectroscopy by Dynamic Nuclear Polarization. <i>Journal of the American Chemical Society</i> , 2010, 132, 15459-15461. | 13.7 | 488 |
| 2 | Fast Characterization of Functionalized Silica Materials by Silicon-29 Surface-Enhanced NMR Spectroscopy Using Dynamic Nuclear Polarization. <i>Journal of the American Chemical Society</i> , 2011, 133, 2104-2107. | 13.7 | 254 |
| 3 | Dynamic Nuclear Polarization NMR Spectroscopy of Microcrystalline Solids. <i>Journal of the American Chemical Society</i> , 2012, 134, 16899-16908. | 13.7 | 242 |
| 4 | The structure and binding mode of citrate in the stabilization of gold nanoparticles. <i>Nature Chemistry</i> , 2017, 9, 890-895. | 13.6 | 222 |
| 5 | A Slowly Relaxing Rigid Biradical for Efficient Dynamic Nuclear Polarization Surface-Enhanced NMR Spectroscopy: Expedient Characterization of Functional Group Manipulation in Hybrid Materials. <i>Journal of the American Chemical Society</i> , 2012, 134, 2284-2291. | 13.7 | 182 |
| 6 | Non-aqueous solvents for DNP surface enhanced NMR spectroscopy. <i>Chemical Communications</i> , 2012, 48, 654-656. | 4.1 | 155 |
| 7 | One hundred fold overall sensitivity enhancements for Silicon-29 NMR spectroscopy of surfaces by dynamic nuclear polarization with CPMG acquisition. <i>Chemical Science</i> , 2012, 3, 108-115. | 7.4 | 141 |
| 8 | Dynamic nuclear polarization of quadrupolar nuclei using cross polarization from protons: surface-enhanced aluminium-27 NMR. <i>Chemical Communications</i> , 2012, 48, 1988. | 4.1 | 123 |
| 9 | Gold Nanoparticles Supported on Passivated Silica: Access to an Efficient Aerobic Epoxidation Catalyst and the Intrinsic Oxidation Activity of Gold. <i>Journal of the American Chemical Society</i> , 2009, 131, 14667-14669. | 13.7 | 111 |
| 10 | BDPA-Nitroxide Biradicals Tailored for Efficient Dynamic Nuclear Polarization Enhanced Solid-State NMR at Magnetic Fields up to 21.1 T. <i>Journal of the American Chemical Society</i> , 2018, 140, 13340-13349. | 13.7 | 99 |
| 11 | Evidence for Metal-Surface Interactions and Their Role in Stabilizing Well-Defined Immobilized Ru-NHC Alkene Metathesis Catalysts. <i>Journal of the American Chemical Society</i> , 2013, 135, 3193-3199. | 13.7 | 96 |
| 12 | Hybrid polarizing solids for pure hyperpolarized liquids through dissolution dynamic nuclear polarization. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 14693-14697. | 7.1 | 93 |
| 13 | Solid-State Dynamic Nuclear Polarization at 9.4 and 18.8 T from 100 K to Room Temperature. <i>Journal of the American Chemical Society</i> , 2015, 137, 14558-14561. | 13.7 | 87 |
| 14 | Transportable hyperpolarized metabolites. <i>Nature Communications</i> , 2017, 8, 13975. | 12.8 | 86 |
| 15 | Influences of Dilute Organic Adsorbates on the Hydration of Low-Surface-Area Silicates. <i>Journal of the American Chemical Society</i> , 2015, 137, 8096-8112. | 13.7 | 85 |
| 16 | A Well-Defined Silica-Supported Tungsten Oxo Alkylidene Is a Highly Active Alkene Metathesis Catalyst. <i>Journal of the American Chemical Society</i> , 2013, 135, 19068-19070. | 13.7 | 83 |
| 17 | Polymorphs of Theophylline Characterized by DNP Enhanced Solid-State NMR. <i>Molecular Pharmaceutics</i> , 2015, 12, 4146-4153. | 4.6 | 77 |
| 18 | Three-Dimensional Structure Determination of Surface Sites. <i>Journal of the American Chemical Society</i> , 2017, 139, 849-855. | 13.7 | 75 |

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|----|---|------|-----------|
| 19 | Dynamic nuclear polarization at 40 kHz magic angle spinning. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 10616-10622. | 2.8 | 74 |
| 20 | TinyPols: a family of water-soluble binitroxides tailored for dynamic nuclear polarization enhanced NMR spectroscopy at 18.8 and 21.1 T. <i>Chemical Science</i> , 2020, 11, 2810-2818. | 7.4 | 72 |
| 21 | Silica-supported single-site catalysts: to be or not to be? A conjecture on silica surfaces. <i>New Journal of Chemistry</i> , 2011, 35, 2403. | 2.8 | 70 |
| 22 | A Well-Defined Pd Hybrid Material for the Selective Semihydrogenation of Alkynes Characterized at the Molecular Level by DNP SENS. <i>Chemistry - A European Journal</i> , 2013, 19, 12234-12238. | 3.3 | 61 |
| 23 | Solid-Phase Polarization Matrixes for Dynamic Nuclear Polarization from Homogeneously Distributed Radicals in Mesostructured Hybrid Silica Materials. <i>Journal of the American Chemical Society</i> , 2013, 135, 15459-15466. | 13.7 | 56 |
| 24 | Molecular-level characterization of the structure and the surface chemistry of periodic mesoporous organosilicates using DNP-surface enhanced NMR spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 13270. | 2.8 | 56 |
| 25 | Dynamic Nuclear Polarization-Enhanced Biomolecular NMR Spectroscopy at High Magnetic Field with Fast Magic-Angle Spinning. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 7458-7462. | 13.8 | 56 |
| 26 | Reactive surface organometallic complexes observed using dynamic nuclear polarization surface enhanced NMR spectroscopy. <i>Chemical Science</i> , 2017, 8, 284-290. | 7.4 | 55 |
| 27 | Well-Defined Silica-Supported Mo-Alkylidene Catalyst Precursors Containing One OR Substituent: Methods of Preparation and Structure-Reactivity Relationship in Alkene Metathesis. <i>Chemistry - A European Journal</i> , 2009, 15, 5083-5089. | 3.3 | 53 |
| 28 | Atomistic Description of Reaction Intermediates for Supported Metathesis Catalysts Enabled by DNP SENS. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 4743-4747. | 13.8 | 52 |
| 29 | Dynamic Nuclear Polarization Efficiency Increased by Very Fast Magic Angle Spinning. <i>Journal of the American Chemical Society</i> , 2017, 139, 10609-10612. | 13.7 | 52 |
| 30 | Aromatic Ring Dynamics, Thermal Activation, and Transient Conformations of a 468 kDa Enzyme by Specific ¹³ C Labeling and Fast Magic-Angle Spinning NMR. <i>Journal of the American Chemical Society</i> , 2019, 141, 11183-11195. | 13.7 | 43 |
| 31 | Oxygen-17 dynamic nuclear polarisation enhanced solid-state NMR spectroscopy at 18.8 T. <i>Chemical Communications</i> , 2017, 53, 2563-2566. | 4.1 | 39 |
| 32 | Predictive morphology, stoichiometry and structure of surface species in supported Ru nanoparticles under H ₂ and CO atmospheres from combined experimental and DFT studies. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 1969-1979. | 2.8 | 36 |
| 33 | Beyond γ -Al ₂ O ₃ crystallite surfaces: The hidden features of edges revealed by solid-state ¹ H NMR and DFT calculations. <i>Journal of Catalysis</i> , 2019, 378, 140-143. | 6.2 | 36 |
| 34 | Hydrogen and oxygen adsorption stoichiometries on silica supported ruthenium nanoparticles. <i>Journal of Catalysis</i> , 2008, 260, 387-391. | 6.2 | 35 |
| 35 | The Nature of Secondary Interactions at Electrophilic Metal Sites of Molecular and Silica-Supported Organolutetium Complexes from Solid-State NMR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2016, 138, 3831-3843. | 13.7 | 35 |
| 36 | Dendritic polarizing agents for DNP SENS. <i>Chemical Science</i> , 2017, 8, 416-422. | 7.4 | 35 |

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|----|---|------|-----------|
| 37 | The Structure of Molecular and Surface Platinum Sites Determined by DNP-SENS and Fast MAS ¹⁹⁵ Pt Solid-State NMR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2020, 142, 18936-18945. | 13.7 | 35 |
| 38 | Iridium(I)/N-Heterocyclic Carbene Hybrid Materials: Surface Stabilization of Low-Valent Iridium Species for High Catalytic Hydrogenation Performance. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 12937-12941. | 13.8 | 33 |
| 39 | Metal-Metal Synergy in Well-Defined Surface Tantalum-Iridium Heterobimetallic Catalysts for H/D Exchange Reactions. <i>Journal of the American Chemical Society</i> , 2019, 141, 19321-19335. | 13.7 | 33 |
| 40 | Preferential Siting of Aluminum Heteroatoms in the Zeolite Catalyst Al ₆₀ SSZ-70. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 6255-6259. | 13.8 | 31 |
| 41 | Structural Characterization of the EtOH-TiCl ₄ -MgCl ₂ Ziegler-Natta Precatalyst. <i>Journal of Physical Chemistry C</i> , 2016, 120, 18075-18087. | 3.1 | 28 |
| 42 | Frozen Acrylamide Gels as Dynamic Nuclear Polarization Matrices. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 8726-8730. | 13.8 | 26 |
| 43 | Structural description of surfaces and interfaces in biominerals by DNP SENS. <i>Solid State Nuclear Magnetic Resonance</i> , 2019, 102, 2-11. | 2.3 | 25 |
| 44 | Tailored Polarizing Hybrid Solids with Nitroxide Radicals Localized in Mesostructured Silica Walls. <i>Helvetica Chimica Acta</i> , 2017, 100, e1700101. | 1.6 | 24 |
| 45 | Predicting the DNP-SENS efficiency in reactive heterogeneous catalysts from hydrophilicity. <i>Chemical Science</i> , 2018, 9, 4866-4872. | 7.4 | 24 |
| 46 | Specific Localization of Aluminum Sites Favors Ethene-to-Propene Conversion on (Al)MCM-41-Supported Ni(II) Single Sites. <i>ACS Catalysis</i> , 2019, 9, 7476-7485. | 11.2 | 24 |
| 47 | Atomic-Scale Structure and Its Impact on Chemical Properties of Aluminum Oxide Layers Prepared by Atomic Layer Deposition on Silica. <i>Chemistry of Materials</i> , 2021, 33, 3335-3348. | 6.7 | 23 |
| 48 | Cubic three-dimensional hybrid silica solids for nuclear hyperpolarization. <i>Chemical Science</i> , 2016, 7, 6846-6850. | 7.4 | 19 |
| 49 | Spectroscopic Signature and Structure of the Active Sites in Ziegler-Natta Polymerization Catalysts Revealed by Electron Paramagnetic Resonance. <i>Journal of the American Chemical Society</i> , 2021, 143, 9791-9797. | 13.7 | 19 |
| 50 | Synthesis and reactivity of molybdenum imido alkylidene bis-pyrazolide complexes. <i>Dalton Transactions</i> , 2010, 39, 8547. | 3.3 | 18 |
| 51 | Hyperpolarization of Frozen Hydrocarbon Gases by Dynamic Nuclear Polarization at 1.2 K. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 3235-3239. | 4.6 | 18 |
| 52 | ¹⁹ F Magic Angle Spinning Dynamic Nuclear Polarization Enhanced NMR Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 7249-7253. | 13.8 | 18 |
| 53 | Atomic-level organization of vicinal acid-base pairs through the chemisorption of aniline and derivatives onto mesoporous SBA15. <i>Chemical Science</i> , 2016, 7, 6099-6105. | 7.4 | 16 |
| 54 | Probing surface site heterogeneity through 1D and INADEQUATE 31P solid state NMR spectroscopy of silica supported PMe ₃ -Au(I) adducts. <i>Chemical Science</i> , 2011, 2, 928. | 7.4 | 15 |

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|----|---|------|-----------|
| 55 | From single-site tantalum complexes to nanoparticles of Ta _x N _y and TaO _x N _y supported on silica: elucidation of synthesis chemistry by dynamic nuclear polarization surface enhanced NMR spectroscopy and X-ray absorption spectroscopy. <i>Chemical Science</i> , 2017, 8, 5650-5661. | 7.4 | 14 |
| 56 | A highly ordered mesostructured material containing regularly distributed phenols: preparation and characterization at a molecular level through ultra-fast magic angle spinning proton NMR spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 4230. | 2.8 | 13 |
| 57 | Atomic-scale Description of Interfaces between Antigen and Aluminum-based Adjuvants Used in Vaccines by Dynamic Nuclear Polarization (DNP) Enhanced NMR Spectroscopy. <i>Chemistry - A European Journal</i> , 2020, 26, 8976-8982. | 3.3 | 13 |
| 58 | Stepwise construction of silica-supported tantalum/iridium heteropolymetallic catalysts using surface organometallic chemistry. <i>Journal of Catalysis</i> , 2020, 392, 287-301. | 6.2 | 11 |
| 59 | One-pot syntheses of heterotelechelic $\hat{\pm}$ -vinyl, $\hat{\text{I}}\%$ -methoxysilane polyethylenes and condensation into comb-like and star-like polymers with high chain end functionality. <i>Polymer Chemistry</i> , 2020, 11, 3884-3891. | 3.9 | 11 |
| 60 | Preferential Siting of Aluminum Heteroatoms in the Zeolite Catalyst Al ₆ SSZ ₇₀ . <i>Angewandte Chemie</i> , 2019, 131, 6321-6325. | 2.0 | 10 |
| 61 | Efficient Dynamic Nuclear Polarization up to 230 K with Hybrid BDPA-Nitroxide Radicals at a High Magnetic Field. <i>Journal of Physical Chemistry B</i> , 2021, 125, 13329-13338. | 2.6 | 9 |
| 62 | Multiple Surface Site Three-Dimensional Structure Determination of a Supported Molecular Catalyst. <i>Journal of the American Chemical Society</i> , 2022, 144, 10270-10281. | 13.7 | 9 |
| 63 | Dynamic Nuclear Polarization-enhanced Biomolecular NMR Spectroscopy at High Magnetic Field with Fast Magic-angle Spinning. <i>Angewandte Chemie</i> , 2018, 130, 7580-7584. | 2.0 | 8 |
| 64 | Atomistic Description of Reaction Intermediates for Supported Metathesis Catalysts Enabled by DNP SENS. <i>Angewandte Chemie</i> , 2016, 128, 4821-4825. | 2.0 | 6 |
| 65 | Phenylazide Hybrid-silica Polarization Platform for Dynamic Nuclear Polarization at Cryogenic Temperatures. <i>Helvetica Chimica Acta</i> , 2017, 100, e1600122. | 1.6 | 6 |
| 66 | Toward the Coordination Fingerprint of the Edge-Sharing BO ₄ Tetrahedra. <i>Inorganic Chemistry</i> , 2021, 60, 2406-2413. | 4.0 | 6 |
| 67 | Supported Ru olefin metathesis catalysts <i>via</i> a thiolate tether. <i>Dalton Transactions</i> , 2019, 48, 2886-2890. | 3.3 | 5 |
| 68 | Harnessing Catalysis Selectivity and Isophorone Diisocyanate Asymmetry for Tailored Polyurethane Prepolymers and Networks. <i>Macromolecules</i> , 2022, 55, 3344-3352. | 4.8 | 5 |
| 69 | Frozen Acrylamide Gels as Dynamic Nuclear Polarization Matrices. <i>Angewandte Chemie</i> , 2017, 129, 8852-8856. | 2.0 | 2 |
| 70 | 19 F Magic Angle Spinning Dynamic Nuclear Polarization Enhanced NMR Spectroscopy. <i>Angewandte Chemie</i> , 2019, 131, 7327-7331. | 2.0 | 2 |
| 71 | Solid-state NMR: a key tool for the understanding at a molecular level of well-defined heterogeneous catalysts and surface chemistry on top of oxide materials. <i>Spectroscopic Properties of Inorganic and Organometallic Compounds</i> , 2012, , 57-83. | 0.4 | 2 |
| 72 | Ni(acac) ₂ and Co(acac) ₂ bis(acetylacetonato) complexes for alkene/vinylsilane silylation and silicone crosslinking. <i>Catalysis Science and Technology</i> , 2021, 11, 4849-4856. | 4.1 | 1 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 73 | Innenrückenbild: Preferential Siting of Aluminum Heteroatoms in the Zeolite Catalyst Al ₂ SSZ-70 (Angew. Chem. 19/2019). Angewandte Chemie, 2019, 131, 6523-6523. | 2.0 | 0 |