

Piotr Pietrzyk

List of Publications by Year in descending order

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56
papers

1,452
citations

331670

21
h-index

345221

36
g-index

64
all docs

64
docs citations

64
times ranked

2048
citing authors

#	ARTICLE	IF	CITATIONS
1	Application of the Genetic Algorithm Joint with the Powell Method to Nonlinear Least-Squares Fitting of Powder EPR Spectra. <i>Journal of Chemical Information and Modeling</i> , 2005, 45, 18-29.	5.4	201
2	Preparation and characterization of SBA-15-supported chromium oxide catalysts for CO ₂ assisted dehydrogenation of propane. <i>Microporous and Mesoporous Materials</i> , 2012, 161, 56-66.	4.4	107
3	Generation of Reactive Oxygen Species via Electroprotic Interaction of H ₂ O ₂ with ZrO ₂ Gel: Ionic Sponge Effect and pH-Switchable Peroxidase- and Catalase-Like Activity. <i>ACS Catalysis</i> , 2017, 7, 2935-2947.	11.2	99
4	Search for reactive intermediates in catalytic oxidation with hydrogen peroxide over amorphous niobium(V) and tantalum(V) oxides. <i>Applied Catalysis B: Environmental</i> , 2015, 164, 288-296.	20.2	90
5	THE ROLE OF INTERMEDIATE CALCIUM ALUMINATE PHASES IN SOLID STATE SYNTHESIS OF MAYENITE (Ca ₁₂ Al ₁₄ O ₃₃). <i>Functional Materials Letters</i> , 2011, 04, 183-186.	1.2	49
6	Molecular Structure, Spin Density Distribution, and Hyperfine Coupling Constants of the $\cdot\{CuNO\}$ Adduct in the ZSM-5 Zeolite: A DFT Calculations and Comparison with EPR Data. <i>Journal of Physical Chemistry B</i> , 2003, 107, 6105-6113.	2.6	46
7	Computational spectroscopy and DFT investigations into nitrogen and oxygen bond breaking and bond making processes in model deNO _x and deN ₂ O reactions. <i>Catalysis Today</i> , 2007, 119, 219-227.	4.4	46
8	Investigations into the Structure of Nitrogen-Containing CMK-3 and OCM-0.75 Carbon Replicas and the Nature of Surface Functional Groups by Spectroscopic and Sorption Techniques. <i>Journal of Physical Chemistry C</i> , 2010, 114, 1208-1216.	3.1	41
9	Characterization of Cr ^{III} /MCM-41 and Al ₂ Cr ^{III} /MCM-41 Mesoporous Catalysts for Gas-Phase Oxidative Dehydrogenation of Cyclohexane. <i>Journal of Physical Chemistry C</i> , 2007, 111, 1830-1839.	3.1	40
10	Diagnostic Features of EPR Spectra of Superoxide Intermediates on Catalytic Surfaces and Molecular Interpretation of Their g and A Tensors. <i>Topics in Catalysis</i> , 2015, 58, 796-810.	2.8	40
11	Heterogeneous Binding of Dioxygen: EPR and DFT Evidence for Side-On Nickel(II) Superoxo Adduct with Unprecedented Magnetic Structure Hosted in MFI Zeolite. <i>Journal of the American Chemical Society</i> , 2011, 133, 19931-19943.	13.7	37
12	Spin Ground State and Magnetic Properties of Cobalt(II): Relativistic DFT Calculations Guided by EPR Measurements of Bis(2,4-acetylacetonate)cobalt(II)-Based Complexes. <i>Journal of Physical Chemistry A</i> , 2011, 115, 2316-2324.	2.5	36
13	Spectroscopic IR, EPR, and operandoDRIFT insights into surface reaction pathways of selective reduction of NO by propene over the Co-BEA zeolite. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 2203-2215.	2.8	35
14	Generation, Identification, and Reactivity of Paramagnetic VO ₂ Centers in Zeolite BEA for Model Studies of Processes Involving Spin Pairing, Electron Transfer, and Oxygen Transfer. <i>Journal of the American Chemical Society</i> , 2007, 129, 14174-14175.	13.7	33
15	Spectroscopic CW-EPR and HYSCORE investigations of Cu ²⁺ and O ₂ ^{•-} species in copper doped nanoporous calcium aluminate (12CaO·7Al ₂ O ₃). <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 10933.	2.8	31
16	Enhanced adsorption and degradation of methylene blue over mixed niobium-cerium oxide: Unraveling the synergy between Nb and Ce in advanced oxidation processes. <i>Journal of Hazardous Materials</i> , 2021, 415, 125665.	12.4	31
17	Co ²⁺ /Co ⁰ redox couple revealed by EPR spectroscopy triggers preferential coordination of reactants during SCR of NO _x with propene over cobalt-exchanged zeolites. <i>Chemical Communications</i> , 2007, , 1930.	4.1	27
18	Combining computational and in situ spectroscopies joint with molecular modeling for determination of reaction intermediates of deNO _x process: CuZSM-5 catalyst case study. <i>Catalysis Today</i> , 2007, 126, 103-111.	4.4	25

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19	Synthesis, structural and antimicrobial studies of type II topoisomerase-targeted copper(II) complexes of 1,3-disubstituted thiourea ligands. <i>Journal of Inorganic Biochemistry</i> , 2018, 182, 61-70.	3.5	25
20	Role of NO ⁺ Intermediates in NO Reduction with Propene over NiZSM-5 Zeolite Revealed by EPR and IR Spectroscopic Investigations and DFT Modeling. <i>Journal of Physical Chemistry C</i> , 2011, 115, 13008-13015.	3.1	24
21	Relativistic Density Functional Calculations of EPR g Tensor for $\hat{1}\{-\{CuNO\}11$ Species in Discrete and Zeolite-Embedded States. <i>Journal of Physical Chemistry A</i> , 2005, 109, 10571-10581.	2.5	23
22	Spectroscopy and Computations of Supported Metal Adducts. 1. DFT Study of CO and NO Adsorption and Coadsorption on Cu/SiO ₂ . <i>Journal of Physical Chemistry B</i> , 2005, 109, 10291-10303.	2.6	20
23	Intimate Binding Mechanism and Structure of Trigonal Nickel(I) Monocarbonyl Adducts in ZSM-5 Zeolite—Spectroscopic Continuous Wave EPR, HYSCORE, and IR Studies Refined with DFT Quantification of Disentangled Electron and Spin Density Redistributions along \hat{f} and \hat{e} Channels. <i>Journal of the American Chemical Society</i> , 2013, 135, 15467-15478.	13.7	20
24	Synthesis, structural studies and biological activity of novel Cu(II) complexes with thiourea derivatives of 4-azatricyclo[5.2.1.0 2,6]dec-8-ene-3,5-dione. <i>Journal of Inorganic Biochemistry</i> , 2017, 176, 8-16.	3.5	20
25	DFT Analysis of g and ¹³ C Hyperfine Coupling Tensors for Model Ni _l (CO) _n L _m (n = 1~4, L = H ₂ O, OH [~]) Complexes Epitomizing Surface Nickel(I) Carbonyls. <i>Journal of Physical Chemistry A</i> , 2008, 112, 12208-12219.	2.5	18
26	Temperature-dependent orientation of self-organized nanopatterns on ion-irradiated TiO ₂ $\langle \mathit{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \mathit{mml:msub} \langle \mathit{mml:mrow} / \rangle \langle \mathit{mml:mn} \rangle 2 \langle \mathit{mml:mn} \rangle \langle \mathit{mml:msub} \langle \mathit{mml:math} \rangle (110) . \mathit{Physical Review B}$, 2013, 88, .	3.2	18
27	New Thiadiazole Dioxide Bridging Ligand with a Stable Radical Form for the Construction of Magnetic Coordination Chains. <i>Crystal Growth and Design</i> , 2014, 14, 4878-4881.	3.0	18
28	EPR and DFT study of NO interaction with Ni/SiO ₂ catalyst: Insight into mechanistic steps of disproportionation process promoted by tripodal surface nickel complex. <i>Catalysis Today</i> , 2006, 114, 154-161.	4.4	16
29	ROS-mediated lipid peroxidation as a result of Cu(II) interaction with FomA protein fragments of <i>F. nucleatum</i> : relevance to colorectal carcinogenesis. <i>Metallomics</i> , 2019, 11, 2066-2077.	2.4	15
30	Structure and mechanistic relevance of Ni ²⁺ +NO adduct in model HC SCR reaction over NiZSM-5 catalyst—Insights from standard and correlation EPR and IR spectroscopic studies corroborated by molecular modeling. <i>Journal of Catalysis</i> , 2021, 394, 206-219.	6.2	14
31	Analysis of NH ₃ TPD Profiles for CuSSZ-13 SCR Catalyst of Controlled Al Distribution—Complexity Resolved by First Principles Thermodynamics of NH ₃ Desorption, IR and EPR Insight into Cu Speciation**. <i>Chemistry - A European Journal</i> , 2021, 27, 17159-17180.	3.3	14
32	Role of chain length of the capping agents of iron oxide based fuel borne catalysts in the enhancement of soot combustion activity. <i>Applied Catalysis B: Environmental</i> , 2016, 199, 485-493.	20.2	13
33	Nitrogen-doped carbon materials derived from acetonitrile and Mg-Co-Al layered double hydroxides as electrocatalysts for oxygen reduction reaction. <i>Electrochimica Acta</i> , 2016, 212, 47-58.	5.2	13
34	Resolving Conformation Dichotomy for Y ⁺ - and T ⁺ -Shaped Three-Coordinate Ni ^I Carbonyl Complexes with Relativistic DFT Analysis of EPR Fingerprints. <i>Chemistry - A European Journal</i> , 2009, 15, 11802-11807.	3.3	12
35	Cu(II) Complexes with FomA Protein Fragments of <i>Fusobacterium Nucleatum</i> Increase Oxidative Stress and Malondialdehyde Level. <i>Chemical Research in Toxicology</i> , 2019, 32, 2227-2237.	3.3	10
36	Nitration and reduction route to surface groups of mesoporous carbons obtained from sucrose and phloroglucinol/formaldehyde precursors. <i>Materials Chemistry and Physics</i> , 2015, 149-150, 539-552.	4.0	9

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37	Physicochemical and electrochemical properties of the carbon materials containing nitrogen and cobalt derived from acetonitrile and Co-Al layered double hydroxides. <i>Journal of Materials Science</i> , 2018, 53, 11292-11314.	3.7	9
38	Photogeneration of reactive oxygen species over ultrafine TiO ₂ particles functionalized with rutin ligand induced sensitization and crystallization effects. <i>Research on Chemical Intermediates</i> , 2019, 45, 5781-5800.	2.7	9
39	The Cytotoxic Effect of Copper (II) Complexes with Halogenated 1,3-Disubstituted Arylthioureas on Cancer and Bacterial Cells. <i>International Journal of Molecular Sciences</i> , 2021, 22, 11415.	4.1	9
40	Unraveling the Origin of Enhanced Activity of the Nb ₂ O ₅ /H ₂ O System in the Elimination of Ciprofloxacin: Insights into the Role of Reactive Oxygen Species in Interface Processes. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 31824-31837.	8.0	9
41	Chapter 2 DFT modeling and spectroscopic investigations into molecular aspects of DeNO _x catalysis. <i>Studies in Surface Science and Catalysis</i> , 2007, , 27-65.	1.5	8
42	Paramagnetic dioxovanadium (V) molecules inside the channels of zeolite BEA – EPR screening of VO ₂ reactivity toward small gas-phase molecules. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 9490-9496.	2.8	8
43	Molecular structures of nickel adducts in zeolites – Interpretation of experimental EPR g-tensors guided by DFT calculations. <i>Journal of Molecular Structure</i> , 2019, 1180, 754-763.	3.6	8
44	Paramagnetic species on catalytic surfaces – DFT investigations into structure sensitivity of the hyperfine coupling constants. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2004, 60, 1257-1265.	3.9	7
45	Mn 3+ -saturated bovine lactoferrin as a new complex with potential prebiotic activities for dysbiosis treatment and prevention – On the synthesis, chemical characterization and origin of biological activity. <i>Journal of Functional Foods</i> , 2017, 38, 264-272.	3.4	7
46	Stability of Cu(II) complexes with FomA protein fragments containing two His residues in the peptide chain. <i>Metallomics</i> , 2019, 11, 1518-1531.	2.4	7
47	Molecular interpretation of EPR parameters - computational spectroscopy approaches. <i>Electron Paramagnetic Resonance</i> , 2012, , 264-311.	0.2	7
48	Relevance of the electron transfer pathway in photodynamic activity of Ru(II) polypyridyl complexes containing 4,7-diphenyl-1,10-phenanthroline ligands under normoxic and hypoxic conditions. <i>Dalton Transactions</i> , 2022, 51, 1888-1900.	3.3	7
49	Magnetic Properties of Monomer and Dimer Tetrahedral VO _x Entities Dispersed on Amorphous Silica-based Materials: Prediction of EPR Parameters from Relativistic DFT Calculations and Broken Symmetry Approach to Exchange Couplings. <i>Applied Magnetic Resonance</i> , 2011, 40, 471-479.	1.2	6
50	Nature and role of Cu(II) species in doped C12A7 catalysts for soot oxidation. <i>Applied Catalysis B: Environmental</i> , 2022, 316, 121604.	20.2	6
51	EPR spectroscopy and DFT calculations of the g tensors of {VO}/ZSM-5, {CuNO}/ZSM-5 and {NaNO}/ZSM-5 intrazeolitic complexes. <i>Studies in Surface Science and Catalysis</i> , 2005, 158, 617-624.	1.5	5
52	DFT calculations of magnetic parameters for molybdenum complexes and hydroxymethyl intermediates trapped on silica surface. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2006, 63, 788-794.	3.9	5
53	Co ₃ O ₄ -ZrO ₂ and Co ₃ O ₄ -Nb ₂ O ₅ crystalline-amorphous composites for H ₂ O ₂ activation via Fenton-like and electroprotic processes – Proof of concept. <i>Catalysis Today</i> , 2022, 384-386, 156-165.	4.4	5
54	Redox states of nickel in zeolites and molecular account into binding of N ₂ to nickel(I) centers – IR, EPR and DFT study. <i>Microporous and Mesoporous Materials</i> , 2020, 291, 109692.	4.4	4

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55	Structure dependent charge transfer in bipyrimidinium-octacyanotungstate ion pairs. Polyhedron, 2016, 119, 1-6.	2.2	2
56	Intermolecular interactions of tetracyanoethylene (TCNE) and fumaronitrile (FN) with minor amines. A combined UV-Vis and EPR study.. Journal of Chemical Physics, 2022, 156, 094301.	3.0	1