Thomas Risse

List of Publications by Year
in descending order

103 papers	3,756 citations	136740 32 h-index	133063 59 g-index
113 all docs	113 docs citations	113 times ranked	3434 citing authors

#	Article	IF	Citations
1	Methanol oxidation on Au(332): methyl formate selectivity and surface deactivation under isothermal conditions. Catalysis Science and Technology, 2022, 12, 1418-1428.	2.1	3
2	Thermal Activation of Nanoporous Gold for Carbon Monoxide Oxidation. Journal of Physical Chemistry C, 2022, 126, 1770-1777.	1.5	4
3	Defects of thin CaO(001) on Mo(001): an EPR spectroscopic perspective. Physical Chemistry Chemical Physics, 2022, 24, 7732-7738.	1.3	3
4	Heterogeneity of oxygen reactivity: key for selectivity of partial methanol oxidation on gold surfaces. Chemical Communications, 2022, 58, 4336-4339.	2.2	1
5	Electron-Stimulated Hydroxylation of Silica Bilayer Films Grown on Ru(0001): A Combined HREELS and EPR Study. Journal of Physical Chemistry C, 2022, 126, 7956-7964.	1.5	1
6	Methanol oxidation on Au(332): an isothermal pulsed molecular beam study. Physical Chemistry Chemical Physics, 2021, 23, 21599-21605.	1.3	6
7	¹⁹F MAS DNP for Probing Molecules in Nanomolar Concentrations: Direct Polarization as Key for Solid-State NMR Spectra without Solvent and Matrix Signals. Journal of Physical Chemistry C, 2021, 125, 7287-7296.	1.5	8
8	In situ electron paramagnetic resonance spectroscopy for catalysis. Nature Reviews Methods Primers, 2021, 1, .	11.8	51
9	Chapter model systems in heterogeneous catalysis at the atomic level: a personal view. Science China Chemistry, 2020, 63, 426-447.	4.2	14
10	F-doping of nanostructured ZnO: a way to modify structural, electronic, and surface properties. Physical Chemistry Chemical Physics, 2020, 22, 11273-11285.	1.3	10
11	Controlling the Interparticular Distances of Extended Non-Close-Packed Colloidal Monolayers. Langmuir, 2020, 36, 4827-4834.	1.6	3
12	The Mechanism of Interfacial CO₂ Activation on Al Doped Cu/ZnO. ACS Catalysis, 2020, 10, 5672-5680.	5.5	21
13	Thin Oxide Films as Model Systems for Heterogeneous Catalysts. Springer Handbooks, 2020, , 267-328.	0.3	1
14	Characterization of Phonon Vibrations of Silica Bilayer Films. Journal of Physical Chemistry C, 2019, 123, 7110-7117.	1.5	8
15	CO Adsorption on Au(332): Combined Infrared Spectroscopy and Density Functional Theory Study. Journal of Physical Chemistry C, 2019, 123, 8187-8197.	1.5	7
16	Operando Electrical Conductivity and Complex Permittivity Study on Vanadia Oxidation Catalysts. Journal of Physical Chemistry C, 2019, 123, 8005-8017.	1.5	17
17	Investigation of the role of the Na2WO4/Mn/SiO2 catalyst composition in the oxidative coupling of methane by chemical looping experiments. Journal of Catalysis, 2018, 360, 102-117.	3.1	76
18	Oxygen-Driven Surface Evolution of Nanoporous Gold: Insights from Ab Initio Molecular Dynamics and Auger Electron Spectroscopy. Journal of Physical Chemistry C, 2018, 122, 5349-5357.	1.5	25

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19	Magnetic Properties of Reduced and Reoxidized Mnâ€“Na₂WO₄/SiO₂: A Catalyst for Oxidative Coupling of Methane (OCM). Journal of Physical Chemistry C, 2018, 122, 22605-22614.	1.5	24
20	Internal Dynamics of the 3-Pyrroline-N-Oxide Ring in Spin-Labeled Proteins. Journal of Physical Chemistry Letters, 2017, 8, 1113-1117.	2.1	2
21	Structural Characterization of Ordered, Non-Close-Packed Functionalized Silica Nanoparticles on Gold Surfaces. Langmuir, 2017, 33, 7494-7502.	1.6	0
22	Combining EPR spectroscopy and X-ray crystallography to elucidate the structure and dynamics of conformationally constrained spin labels in T4 lysozyme single crystals. Physical Chemistry Chemical Physics, 2017, 19, 20723-20734.	1.3	5
23	Charge Transfer Processes on Ultrathin Oxide Films. Springer Series in Materials Science, 2016, , 281-310.	0.4	0
24	Tracking Transient Conformational States of T4 Lysozyme at Room Temperature Combining X-ray Crystallography and Site-Directed Spin Labeling. Journal of the American Chemical Society, 2016, 138, 12868-12875.	6.6	13
25	Location of Trapped Electron Centers in the Bulk of Epitaxial MgO(001) Films Grown on Mo(001) UsinginÂsitu<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>W</mml:mi></mml:math>-band Electron Paramagnetic Resonance Spectroscopy. Physical Review Letters, 2016, 117, 016801.	2.9	6
26	Evidence for Exchange Coupled Electrons and Holes in MgO after Oxidative Activation of CH₄: A Multifrequency Transient Nutation EPR Study. Journal of Physical Chemistry C, 2016, 120, 3781-3790.	1.5	18
27	Controlling the Interaction and Non-Close-Packed Arrangement of Nanoparticles on Large Areas. ACS Nano, 2016, 10, 3525-3535.	7.3	32
28	Structural Insights into the Incorporation of the Mo Cofactor into Sulfite Oxidase from Siteâ€Đirected Spin Labeling. Angewandte Chemie - International Edition, 2015, 54, 11865-11869.	7.2	6
29	Polyglycerol based coatings to reduce non-specific protein adsorption in sample vials and on SPR sensors. Analytica Chimica Acta, 2015, 867, 47-55.	2.6	14
30	Ordered Structures of Functionalized Silica Nanoparticles on Gold Surfaces: Correlation of Quartz Crystal Microbalance with Structural Characterization. Analytical Chemistry, 2015, 87, 10642-10649.	3.2	24
31	Characterization of Oâ¯-Centers on Single Crystalline MgO(001)-Films. Topics in Catalysis, 2015, 58, 811-823.	1.3	5
32	High field electron paramagnetic resonance spectroscopy under ultrahigh vacuum conditionsâ€”A multipurpose machine to study paramagnetic species on well defined single crystal surfaces. Review of Scientific Instruments, 2014, 85, 083903.	0.6	4
33	Site-Directed Spin Labelling of Sulfite Oxidase using Non Natural Amino Acids. Biophysical Journal, 2014, 106, 192a.	0.2	0
34	A fresh look at an old nano-technology: catalysis. Physical Chemistry Chemical Physics, 2014, 16, 8148.	1.3	55
35	Ketoxime Coupling of p-Acetylphenylalanine at Neutral pH for Site-Directed Spin Labeling of Human Sulfite Oxidase. Journal of Physical Chemistry B, 2014, 118, 7077-7084.	1.2	16
36	The role of statistics and microenvironment for the photoresponse in multi-switch architectures: The case of photoswitchable oligoazobenzene foldamers. Chemical Science, 2013, 4, 4156.	3.7	33

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37	Characterisation of paramagnetic Mo impurities on MgO(100) single-crystalline films grown on Mo(100). Molecular Physics, 2013, 111, 2708-2716.	0.8	5
38	Model Catalysts Based on Au Clusters and Nanoparticles. Structure and Bonding, 2013, , 91-138.	1.0	1
39	Lithium as a Modifier for Morphology and Defect Structure of Porous Magnesium Oxide Materials Prepared by Gel Combustion Synthesis. ChemCatChem, 2011, 3, 1779-1788.	1.8	30
40	Model Studies in Catalysis. Topics in Catalysis, 2011, 54, 4-12.	1.3	50
41	Innovative Measurement Techniques in Surface Science. ChemPhysChem, 2011, 12, 79-87.	1.0	28
42	Activation of Oxygen on MgO: O₂^{.â¯} Radical Ion Formation on Thin, Metalâ€Supported MgO(001) Films. Angewandte Chemie - International Edition, 2011, 50, 2635-2638.	7.2	101
43	Temperatureâ€Dependent Morphology, Magnetic and Optical Properties of Liâ€Doped MgO. ChemCatChem, 2010, 2, 854-862.	1.8	102
44	Electron trapping in misfit dislocations of MgO thin films. Physical Review B, 2010, 81, .	1.1	57
45	N₂O Adsorption on the Surface of MgO(001) Thin Films: An Infrared and TPD Study. Journal of Physical Chemistry C, 2010, 114, 3148-3151.	1.5	6
46	Charge-Mediated Adsorption Behavior of CO on MgO-Supported Au Clusters. Journal of the American Chemical Society, 2010, 132, 7745-7749.	6.6	112
47	Additive coloring of thin, single crystalline MgO(001) films. Physical Chemistry Chemical Physics, 2010, 12, 12520.	1.3	8
48	Gold atoms and clusters on MgO(100) films; an EPR and IRAS study. Surface Science, 2009, 603, 1622-1628.	0.8	28
49	FÃ¼r mehr Sicherheit in der Hochschullaufbahn. Nachrichten Aus Der Chemie, 2009, 57, 1160-1161.	0.0	0
50	Properties of Alkali Metal Atoms Deposited on a MgO Surface: A Systematic Experimental and Theoretical Study. Chemistry - A European Journal, 2008, 14, 4404-4414.	1.7	29
51	UHV Studies of Methanol Decomposition on Monoâ€and Bimetallic CoPd Nanoparticles Supported on Thin Alumina Films. ChemPhysChem, 2008, 9, 729-739.	1.0	11
52	Li atoms deposited on single crystalline MgO(001) surface. A combined experimental and theoretical study. Chemical Physics Letters, 2008, 450, 308-311.	1.2	25
53	Gold Supported on Thin Oxide Films: From Single Atoms to Nanoparticles. Accounts of Chemical Research, 2008, 41, 949-956.	7.6	196
54	Au Dimers on Thin MgO(001) Films: Flat and Charged or Upright and Neutral?. Journal of the American Chemical Society, 2008, 130, 7814-7815.	6.6	62

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55	Charge-induced formation of linear Au clusters on thin MgO films: Scanning tunneling microscopy and density-functional theory study. Physical Review B, 2008, 78, .	1.1	64
56	On the Origin of the Polar Order of T4 Lysozyme on Planar Model Surfaces. Journal of Physical Chemistry B, 2008, 112, 967-972.	1.2	2
57	Influence of Pd codeposition on the magnetic properties of Co particles on alumina/NiAl(110). Journal of Chemical Physics, 2008, 129, 114703.	1.2	3
58	Local zero-bias anomaly in tunneling spectra of a transition-metal oxide thin film. Physical Review B, 2007, 75, .	1.1	20
59	Crossover from Three-Dimensional to Two-Dimensional Geometries of Au Nanostructures on Thin MgO(001) Films: A Confirmation of Theoretical Predictions. Physical Review Letters, 2007, 98, 206103.	2.9	211
60	Control of the Charge State of Metal Atoms on Thin MgO Films. Physical Review Letters, 2007, 98, 096107.	2.9	310
61	Oxidation of Alumina-Supported Co and Coâ^'Pd Model Catalysts for the Fischerâ^'Tropsch Reaction. Journal of Physical Chemistry C, 2007, 111, 8566-8572.	1.5	35
62	Palladium Monomers, Dimers, and Trimers on the MgO(001) Surface Viewed Individually. Angewandte Chemie - International Edition, 2007, 46, 8703-8706.	7.2	32
63	Characterization of a Pdâ€“Fe bimetallic model catalyst. Surface Science, 2007, 601, 2105-2116.	0.8	49
64	Electron Paramagnetic Resonance and Scanning Tunneling Microscopy Investigations on the Formation of F+and F0Color Centers on the Surface of Thin MgO(001) Films. Journal of Physical Chemistry B, 2006, 110, 8665-8669.	1.2	51
65	Identification of Color Centers on MgO(001) Thin Films with Scanning Tunneling Microscopy. Journal of Physical Chemistry B, 2006, 110, 46-49.	1.2	143
66	Binding of Single Gold Atoms on Thin MgO(001) Films. Physical Review Letters, 2006, 96, 146804.	2.9	120
67	CO adsorption on the surface of MgO(001) thin films. Applied Catalysis A: General, 2006, 307, 58-61.	2.2	25
68	EPR properties of Au atoms adsorbed on various sites of the MgO(100) surface from relativistic DFT calculations. Surface Science, 2006, 600, 2434-2442.	0.8	24
69	Interaction of Gold Clusters with Color Centers on MgO(001) Films. Angewandte Chemie - International Edition, 2006, 45, 2630-2632.	7.2	154
70	When the Reporter Induces the Effect: Unusual IR spectra of CO on Au1/MgO(001)/Mo(001). Angewandte Chemie - International Edition, 2006, 45, 2633-2635.	7.2	101
71	Details of the Partial Unfolding of T4 Lysozyme on Quartz Using Site-Directed Spin Labeling. Angewandte Chemie - International Edition, 2006, 45, 3874-3877.	7.2	28
72	Density-functional model cluster studies of EPR g tensors of Fs+ centers on the surface of MgO. Journal of Chemical Physics, 2006, 124, 044708.	1.2	36

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73	Low temperature infrared spectra of CO adsorbed on the surface of MgO(001) thin films. Surface Science, 2005, 596, 222-228.	0.8	34
74	Determination of the Orientation of T4 Lysozyme Vectorially Bound to a Planar-Supported Lipid Bilayer Using Site-Directed Spin Labeling. Biophysical Journal, 2005, 88, 4351-4365.	0.2	30
75	Geometric Characterization of a Singly Charged Oxygen Vacancy on a Single-Crystalline MgO(001) Film by Electron Paramagnetic Resonance Spectroscopy. Physical Review Letters, 2005, 94, 186101.	2.9	181
76	Reorganization of small Co particles on Al2O3 surfaces monitored by ferromagnetic resonance. Journal of Chemical Physics, 2005, 122, 164704.	1.2	11
77	Structural Changes in Nanoparticle Catalysts as Monitored by Their Magnetic Properties. Angewandte Chemie - International Edition, 2004, 43, 517-520.	7.2	13
78	Preparation and characterization of model catalysts: from ultrahigh vacuum to in situ conditions at the atomic dimension. Journal of Catalysis, 2003, 216, 223-235.	3.1	155
79	Using IR intensities as a probe for studying the surface chemical bond. Surface Science, 2003, 546, L829-L835.	0.8	35
80	Cluster, facets, and edges: Site-dependent selective chemistry on model catalysts. Chemical Record, 2003, 3, 181-201.	2.9	53
81	Structure and Dynamics of Annexin 12 Bound to a Planar Lipid Bilayer. Physical Review Letters, 2003, 91, 188101.	2.9	17
82	Surface structure of Coâ€“Pd bimetallic particles supported on Al2O3 thin films studied using infrared reflection absorption spectroscopy of CO. Journal of Chemical Physics, 2003, 119, 10885-10894.	1.2	40
83	Characterization of a model Zieglerâ€“Natta catalyst for ethylene polymerization. Journal of Chemical Physics, 2002, 116, 10861-10868.	1.2	45
84	Direkte Beobachtung von Radikalen bei der Aktivierung von Ziegler-Natta-Katalysatoren. Angewandte Chemie, 2002, 114, 1587-1591.	1.6	9
85	Direct Observation of Radicals in the Activation of Ziegler-Natta Catalysts. Angewandte Chemie - International Edition, 2002, 41, 1517-1520.	7.2	26
86	Model in Heterogeneous Catalysis: Surface Science Quo Vadis?. Physica Status Solidi A, 2001, 187, 257-274.	1.7	34
87	Molecules on Clean and Modified Oxide Surfaces. , 2000, , 91-128.		0
88	FMR studies on ultrathin metallic films grown on Al2O3 surfaces. Journal of Magnetism and Magnetic Materials, 1999, 198-199, 354-356.	1.0	11
89	Changes in the magnetism of small supported cobalt particles during the oxidation process observed by ferromagnetic resonance. Surface Science, 1999, 429, 246-254.	0.8	15
90	NEXAFS measurements of the molecular ordering in the boundary layers of liquid crystalline free standing films. Liquid Crystals, 1999, 26, 1713-1716.	0.9	0

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91	Influence of CO adsorption on the magnetism of small Co particles deposited on Al2O3. Chemical Physics Letters, 1998, 292, 524-530.	1.2	38
92	Metal Aggregates on Oxide Surfaces: Structure and Adsorption. Crystal Research and Technology, 1998, 33, 977-1008.	0.6	17
93	Investigation of the Molecular Motion of Self-Assembled Fatty Acid Films. Journal of Physical Chemistry B, 1998, 102, 2668-2676.	1.2	24
94	Investigation of the rotational motion of self-assembled fatty acid films: An electron paramagnetic resonance line shape analysis. Journal of Chemical Physics, 1998, 108, 8615-8625.	1.2	11
95	Dynamics of the Stable Radical Di-tert-butyl Nitroxide on an Epitaxially Grown Al2O3Film. Journal of Physical Chemistry B, 1997, 101, 3776-3780.	1.2	8
96	Adsorption of the Stable Radical Di-tert-butyl Nitroxide (DTBN) on an Epitaxially Grown Al2O3Filmâ€. Journal of Physical Chemistry B, 1997, 101, 552-560.	1.2	24
97	ESR and TPD Investigations of the Adsorption of Di-tert-butyl Nitroxide on Au(111) and NiO(111). Evidence for Long-Range Interactions. Journal of Magnetic Resonance, 1997, 126, 242-247.	1.2	6
98	Electron Spin Resonance Spectroscopic Investigation of the Rotational Motion of Self-Assembled Fatty Acid Films on Al2O3/NiAl(110). Langmuir, 1996, 12, 5512-5514.	1.6	14
99	Orientation and Dynamics of NO2 in a N2O4 Host Matrix Prepared on a Plane Surface Investigated by ESR Line Shape Analysis. The Journal of Physical Chemistry, 1996, 100, 9242-9246.	2.9	2
100	Autoionization spectroscopy of CO on metal oxide surfaces. Journal of Electron Spectroscopy and Related Phenomena, 1996, 77, 155-171.	0.8	7
101	Electron Spin Resonance Investigations of the Molecular Motion of NO2onAl2O3(111) under Ultrahigh Vacuum Conditions. Physical Review Letters, 1995, 74, 761-764.	2.9	52
102	Chapter 1. In situ electron paramagnetic resonance (EPR) â€“ a unique tool for analysing structure and reaction behaviour of paramagnetic sites in model and real catalysts. Catalysis, 0, , 1-32.	0.6	20
103	Low-Temperature Oxidation of Methyl Formate on Au(332). Journal of Physical Chemistry C, 0, , .	1.5	1