

# Thomas Risse

## List of Publications by Year in descending order

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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	Control of the Charge State of Metal Atoms on Thin MgO Films. <i>Physical Review Letters</i> , 2007, 98, 096107.	2.9	310
2	Crossover from Three-Dimensional to Two-Dimensional Geometries of Au Nanostructures on Thin MgO(001) Films: A Confirmation of Theoretical Predictions. <i>Physical Review Letters</i> , 2007, 98, 206103.	2.9	211
3	Gold Supported on Thin Oxide Films: From Single Atoms to Nanoparticles. <i>Accounts of Chemical Research</i> , 2008, 41, 949-956.	7.6	196
4	Geometric Characterization of a Singly Charged Oxygen Vacancy on a Single-Crystalline MgO(001) Film by Electron Paramagnetic Resonance Spectroscopy. <i>Physical Review Letters</i> , 2005, 94, 186101.	2.9	181
5	Preparation and characterization of model catalysts: from ultrahigh vacuum to in situ conditions at the atomic dimension. <i>Journal of Catalysis</i> , 2003, 216, 223-235.	3.1	155
6	Interaction of Gold Clusters with Color Centers on MgO(001) Films. <i>Angewandte Chemie - International Edition</i> , 2006, 45, 2630-2632.	7.2	154
7	Identification of Color Centers on MgO(001) Thin Films with Scanning Tunneling Microscopy. <i>Journal of Physical Chemistry B</i> , 2006, 110, 46-49.	1.2	143
8	Binding of Single Gold Atoms on Thin MgO(001) Films. <i>Physical Review Letters</i> , 2006, 96, 146804.	2.9	120
9	Charge-Mediated Adsorption Behavior of CO on MgO-Supported Au Clusters. <i>Journal of the American Chemical Society</i> , 2010, 132, 7745-7749.	6.6	112
10	Temperature-Dependent Morphology, Magnetic and Optical Properties of Li-Doped MgO. <i>ChemCatChem</i> , 2010, 2, 854-862.	1.8	102
11	When the Reporter Induces the Effect: Unusual IR spectra of CO on Au <sub>1</sub> /MgO(001)/Mo(001). <i>Angewandte Chemie - International Edition</i> , 2006, 45, 2633-2635.	7.2	101
12	Activation of Oxygen on MgO: O <sub>2</sub> <sup>•-</sup> Radical Ion Formation on Thin, Metal-Supported MgO(001) Films. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 2635-2638.	7.2	101
13	Investigation of the role of the Na <sub>2</sub> WO <sub>4</sub> /Mn/SiO <sub>2</sub> catalyst composition in the oxidative coupling of methane by chemical looping experiments. <i>Journal of Catalysis</i> , 2018, 360, 102-117.	3.1	76
14	Charge-induced formation of linear Au clusters on thin MgO films: Scanning tunneling microscopy and density-functional theory study. <i>Physical Review B</i> , 2008, 78, .	1.1	64
15	Au Dimers on Thin MgO(001) Films: Flat and Charged or Upright and Neutral?. <i>Journal of the American Chemical Society</i> , 2008, 130, 7814-7815.	6.6	62
16	Electron trapping in misfit dislocations of MgO thin films. <i>Physical Review B</i> , 2010, 81, .	1.1	57
17	A fresh look at an old nano-technology: catalysis. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 8148.	1.3	55
18	Cluster, facets, and edges: Site-dependent selective chemistry on model catalysts. <i>Chemical Record</i> , 2003, 3, 181-201.	2.9	53

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19	Electron Spin Resonance Investigations of the Molecular Motion of NO <sub>2</sub> on Al <sub>2</sub> O <sub>3</sub> (111) under Ultrahigh Vacuum Conditions. <i>Physical Review Letters</i> , 1995, 74, 761-764.	2.9	52
20	Electron Paramagnetic Resonance and Scanning Tunneling Microscopy Investigations on the Formation of F <sup>+</sup> and F <sup>0</sup> Color Centers on the Surface of Thin MgO(001) Films. <i>Journal of Physical Chemistry B</i> , 2006, 110, 8665-8669.	1.2	51
21	In situ electron paramagnetic resonance spectroscopy for catalysis. <i>Nature Reviews Methods Primers</i> , 2021, 1, .	11.8	51
22	Model Studies in Catalysis. <i>Topics in Catalysis</i> , 2011, 54, 4-12.	1.3	50
23	Characterization of a Pd-Fe bimetallic model catalyst. <i>Surface Science</i> , 2007, 601, 2105-2116.	0.8	49
24	Characterization of a model Ziegler-Natta catalyst for ethylene polymerization. <i>Journal of Chemical Physics</i> , 2002, 116, 10861-10868.	1.2	45
25	Surface structure of Co-Pd bimetallic particles supported on Al <sub>2</sub> O <sub>3</sub> thin films studied using infrared reflection absorption spectroscopy of CO. <i>Journal of Chemical Physics</i> , 2003, 119, 10885-10894.	1.2	40
26	Influence of CO adsorption on the magnetism of small Co particles deposited on Al <sub>2</sub> O <sub>3</sub> . <i>Chemical Physics Letters</i> , 1998, 292, 524-530.	1.2	38
27	Density-functional model cluster studies of EPR g tensors of F <sup>s+</sup> centers on the surface of MgO. <i>Journal of Chemical Physics</i> , 2006, 124, 044708.	1.2	36
28	Using IR intensities as a probe for studying the surface chemical bond. <i>Surface Science</i> , 2003, 546, L829-L835.	0.8	35
29	Oxidation of Alumina-Supported Co and Co-Pd Model Catalysts for the Fischer-Tropsch Reaction. <i>Journal of Physical Chemistry C</i> , 2007, 111, 8566-8572.	1.5	35
30	Model in Heterogeneous Catalysis: Surface Science Quo Vadis?. <i>Physica Status Solidi A</i> , 2001, 187, 257-274.	1.7	34
31	Low temperature infrared spectra of CO adsorbed on the surface of MgO(001) thin films. <i>Surface Science</i> , 2005, 596, 222-228.	0.8	34
32	The role of statistics and microenvironment for the photoresponse in multi-switch architectures: The case of photoswitchable oligoazobenzene foldamers. <i>Chemical Science</i> , 2013, 4, 4156.	3.7	33
33	Palladium Monomers, Dimers, and Trimers on the MgO(001) Surface Viewed Individually. <i>Angewandte Chemie - International Edition</i> , 2007, 46, 8703-8706.	7.2	32
34	Controlling the Interaction and Non-Close-Packed Arrangement of Nanoparticles on Large Areas. <i>ACS Nano</i> , 2016, 10, 3525-3535.	7.3	32
35	Determination of the Orientation of T4 Lysozyme Vectorially Bound to a Planar-Supported Lipid Bilayer Using Site-Directed Spin Labeling. <i>Biophysical Journal</i> , 2005, 88, 4351-4365.	0.2	30
36	Lithium as a Modifier for Morphology and Defect Structure of Porous Magnesium Oxide Materials Prepared by Gel Combustion Synthesis. <i>ChemCatChem</i> , 2011, 3, 1779-1788.	1.8	30

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37	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
38	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
39	Gold atoms and clusters on MgO(100) films; an EPR and IRAS study. Surface Science, 2009, 603, 1622-1628.	0.8	28
40	Innovative Measurement Techniques in Surface Science. ChemPhysChem, 2011, 12, 79-87.	1.0	28
41	Direct Observation of Radicals in the Activation of Ziegler-Natta Catalysts. Angewandte Chemie - International Edition, 2002, 41, 1517-1520.	7.2	26
42	CO adsorption on the surface of MgO(001) thin films. Applied Catalysis A: General, 2006, 307, 58-61.	2.2	25
43	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
44	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
45	Adsorption of the Stable Radical Di-tert-butyl Nitroxide (DTBN) on an Epitaxially Grown Al <sub>2</sub> O <sub>3</sub> Film. Journal of Physical Chemistry B, 1997, 101, 552-560.	1.2	24
46	Investigation of the Molecular Motion of Self-Assembled Fatty Acid Films. Journal of Physical Chemistry B, 1998, 102, 2668-2676.	1.2	24
47	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
48	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
49	Magnetic Properties of Reduced and Reoxidized Mn <sup>2+</sup> /WO <sub>4</sub> /SiO <sub>2</sub> : A Catalyst for Oxidative Coupling of Methane (OCM). Journal of Physical Chemistry C, 2018, 122, 22605-22614.	1.5	24
50	The Mechanism of Interfacial CO <sub>2</sub> Activation on Al Doped Cu/ZnO. ACS Catalysis, 2020, 10, 5672-5680.	5.5	21
51	Local zero-bias anomaly in tunneling spectra of a transition-metal oxide thin film. Physical Review B, 2007, 75, .	1.1	20
52	Chapter 1. <i>In situ</i> electron paramagnetic resonance (EPR) – a unique tool for analysing structure and reaction behaviour of paramagnetic sites in model and real catalysts. Catalysis, 0, , 1-32.	0.6	20
53	Evidence for Exchange Coupled Electrons and Holes in MgO after Oxidative Activation of CH <sub>4</sub> : A Multifrequency Transient Nutation EPR Study. Journal of Physical Chemistry C, 2016, 120, 3781-3790.	1.5	18
54	Metal Aggregates on Oxide Surfaces: Structure and Adsorption. Crystal Research and Technology, 1998, 33, 977-1008.	0.6	17

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55	Structure and Dynamics of Annexin 12 Bound to a Planar Lipid Bilayer. <i>Physical Review Letters</i> , 2003, 91, 188101.	2.9	17
56	Operando Electrical Conductivity and Complex Permittivity Study on Vanadia Oxidation Catalysts. <i>Journal of Physical Chemistry C</i> , 2019, 123, 8005-8017.	1.5	17
57	Ketoxime Coupling of <i>p</i> -Acetylphenylalanine at Neutral pH for Site-Directed Spin Labeling of Human Sulfite Oxidase. <i>Journal of Physical Chemistry B</i> , 2014, 118, 7077-7084.	1.2	16
58	Changes in the magnetism of small supported cobalt particles during the oxidation process observed by ferromagnetic resonance. <i>Surface Science</i> , 1999, 429, 246-254.	0.8	15
59	Electron Spin Resonance Spectroscopic Investigation of the Rotational Motion of Self-Assembled Fatty Acid Films on Al <sub>2</sub> O <sub>3</sub> /NiAl(110). <i>Langmuir</i> , 1996, 12, 5512-5514.	1.6	14
60	Polyglycerol based coatings to reduce non-specific protein adsorption in sample vials and on SPR sensors. <i>Analytica Chimica Acta</i> , 2015, 867, 47-55.	2.6	14
61	Chapter model systems in heterogeneous catalysis at the atomic level: a personal view. <i>Science China Chemistry</i> , 2020, 63, 426-447.	4.2	14
62	Structural Changes in Nanoparticle Catalysts as Monitored by Their Magnetic Properties. <i>Angewandte Chemie - International Edition</i> , 2004, 43, 517-520.	7.2	13
63	Tracking Transient Conformational States of T4 Lysozyme at Room Temperature Combining X-ray Crystallography and Site-Directed Spin Labeling. <i>Journal of the American Chemical Society</i> , 2016, 138, 12868-12875.	6.6	13
64	Investigation of the rotational motion of self-assembled fatty acid films: An electron paramagnetic resonance line shape analysis. <i>Journal of Chemical Physics</i> , 1998, 108, 8615-8625.	1.2	11
65	FMR studies on ultrathin metallic films grown on Al <sub>2</sub> O <sub>3</sub> surfaces. <i>Journal of Magnetism and Magnetic Materials</i> , 1999, 198-199, 354-356.	1.0	11
66	Reorganization of small Co particles on Al <sub>2</sub> O <sub>3</sub> surfaces monitored by ferromagnetic resonance. <i>Journal of Chemical Physics</i> , 2005, 122, 164704.	1.2	11
67	UHV Studies of Methanol Decomposition on Mono- and Bimetallic CoPd Nanoparticles Supported on Thin Alumina Films. <i>ChemPhysChem</i> , 2008, 9, 729-739.	1.0	11
68	F-doping of nanostructured ZnO: a way to modify structural, electronic, and surface properties. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 11273-11285.	1.3	10
69	Direkte Beobachtung von Radikalen bei der Aktivierung von Ziegler-Natta-Katalysatoren. <i>Angewandte Chemie</i> , 2002, 114, 1587-1591.	1.6	9
70	Dynamics of the Stable Radical Di-tert-butyl Nitroxide on an Epitaxially Grown Al <sub>2</sub> O <sub>3</sub> Film. <i>Journal of Physical Chemistry B</i> , 1997, 101, 3776-3780.	1.2	8
71	Additive coloring of thin, single crystalline MgO(001) films. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 12520.	1.3	8
72	Characterization of Phonon Vibrations of Silica Bilayer Films. <i>Journal of Physical Chemistry C</i> , 2019, 123, 7110-7117.	1.5	8

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73	<sup>19</sup> F MAS DNP for Probing Molecules in Nanomolar Concentrations: Direct Polarization as Key for Solid-State NMR Spectra without Solvent and Matrix Signals. <i>Journal of Physical Chemistry C</i> , 2021, 125, 7287-7296.	1.5	8
74	Autoionization spectroscopy of CO on metal oxide surfaces. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1996, 77, 155-171.	0.8	7
75	CO Adsorption on Au(332): Combined Infrared Spectroscopy and Density Functional Theory Study. <i>Journal of Physical Chemistry C</i> , 2019, 123, 8187-8197.	1.5	7
76	ESR and TPD Investigations of the Adsorption of Di-tert-butyl Nitroxide on Au(111) and NiO(111). Evidence for Long-Range Interactions. <i>Journal of Magnetic Resonance</i> , 1997, 126, 242-247.	1.2	6
77	N <sub>2</sub> O Adsorption on the Surface of MgO(001) Thin Films: An Infrared and TPD Study. <i>Journal of Physical Chemistry C</i> , 2010, 114, 3148-3151.	1.5	6
78	Structural Insights into the Incorporation of the Mo Cofactor into Sulfite Oxidase from Site-Directed Spin Labeling. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 11865-11869.	7.2	6
79	Location of Trapped Electron Centers in the Bulk of Epitaxial MgO(001) Films Grown on Mo(001) Using <i>in situ</i> W-band Electron Paramagnetic Resonance Spectroscopy. <i>Physical Review Letters</i> , 2016, 117, 016801.	2.9	6
80	Methanol oxidation on Au(332): an isothermal pulsed molecular beam study. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 21599-21605.	1.3	6
81	Characterisation of paramagnetic Mo impurities on MgO(100) single-crystalline films grown on Mo(100). <i>Molecular Physics</i> , 2013, 111, 2708-2716.	0.8	5
82	Characterization of O <sup>•</sup> -Centers on Single Crystalline MgO(001)-Films. <i>Topics in Catalysis</i> , 2015, 58, 811-823.	1.3	5
83	Combining EPR spectroscopy and X-ray crystallography to elucidate the structure and dynamics of conformationally constrained spin labels in T4 lysozyme single crystals. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 20723-20734.	1.3	5
84	High field electron paramagnetic resonance spectroscopy under ultrahigh vacuum conditions: A multipurpose machine to study paramagnetic species on well defined single crystal surfaces. <i>Review of Scientific Instruments</i> , 2014, 85, 083903.	0.6	4
85	Thermal Activation of Nanoporous Gold for Carbon Monoxide Oxidation. <i>Journal of Physical Chemistry C</i> , 2022, 126, 1770-1777.	1.5	4
86	Influence of Pd codeposition on the magnetic properties of Co particles on alumina/NiAl(110). <i>Journal of Chemical Physics</i> , 2008, 129, 114703.	1.2	3
87	Controlling the Interparticular Distances of Extended Non-Close-Packed Colloidal Monolayers. <i>Langmuir</i> , 2020, 36, 4827-4834.	1.6	3
88	Methanol oxidation on Au(332): methyl formate selectivity and surface deactivation under isothermal conditions. <i>Catalysis Science and Technology</i> , 2022, 12, 1418-1428.	2.1	3
89	Defects of thin CaO(001) on Mo(001): an EPR spectroscopic perspective. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 7732-7738.	1.3	3
90	Orientation and Dynamics of NO <sub>2</sub> in a N <sub>2</sub> O <sub>4</sub> Host Matrix Prepared on a Plane Surface Investigated by ESR Line Shape Analysis. <i>The Journal of Physical Chemistry</i> , 1996, 100, 9242-9246.	2.9	2

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91	On the Origin of the Polar Order of T4 Lysozyme on Planar Model Surfaces. <i>Journal of Physical Chemistry B</i> , 2008, 112, 967-972.	1.2	2
92	Internal Dynamics of the 3-Pyrroline-<i>N</i>-Oxide Ring in Spin-Labeled Proteins. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 1113-1117.	2.1	2
93	Model Catalysts Based on Au Clusters and Nanoparticles. <i>Structure and Bonding</i> , 2013, , 91-138.	1.0	1
94	Thin Oxide Films as Model Systems for Heterogeneous Catalysts. <i>Springer Handbooks</i> , 2020, , 267-328.	0.3	1
95	Low-Temperature Oxidation of Methyl Formate on Au(332). <i>Journal of Physical Chemistry C</i> , 0, , .	1.5	1
96	Heterogeneity of oxygen reactivity: key for selectivity of partial methanol oxidation on gold surfaces. <i>Chemical Communications</i> , 2022, 58, 4336-4339.	2.2	1
97	Electron-Stimulated Hydroxylation of Silica Bilayer Films Grown on Ru(0001): A Combined HREELS and EPR Study. <i>Journal of Physical Chemistry C</i> , 2022, 126, 7956-7964.	1.5	1
98	NEXAFS measurements of the molecular ordering in the boundary layers of liquid crystalline free standing films. <i>Liquid Crystals</i> , 1999, 26, 1713-1716.	0.9	0
99	FÄ¼r mehr Sicherheit in der Hochschullaufbahn. <i>Nachrichten Aus Der Chemie</i> , 2009, 57, 1160-1161.	0.0	0
100	Site-Directed Spin Labelling of Sulfite Oxidase using Non Natural Amino Acids. <i>Biophysical Journal</i> , 2014, 106, 192a.	0.2	0
101	Charge Transfer Processes on Ultrathin Oxide Films. <i>Springer Series in Materials Science</i> , 2016, , 281-310.	0.4	0
102	Structural Characterization of Ordered, Non-Close-Packed Functionalized Silica Nanoparticles on Gold Surfaces. <i>Langmuir</i> , 2017, 33, 7494-7502.	1.6	0
103	Molecules on Clean and Modified Oxide Surfaces. , 2000, , 91-128.		0