

Academic publications

Reaktivitätsstudien an Metalloxidclustern in der Gasphase: Bismutoxid-Clusterkationen als aktive Zentren bei der Alkenoxidation (Reactivity studies of metal oxide clusters in the gas phase: bismuth oxide cluster cations as active centers for alkene oxidation)

A. Fielicke, Doctoral Thesis, Humboldt-Universität zu Berlin, 2001.

Massenspektroskopische Untersuchungen zur Alkenoxidation an Silber(I)-oxid und Titansilikalithen: Heterogene Gasphasenoxidationen (Mass spectrometric investigations of alkene oxidations with silver(I) oxide and titanium silicalites: heterogeneous gas-phase oxidations)

A. Fielicke, Diploma Thesis, Humboldt-Universität zu Berlin, 1996.

Book chapters**B5** *Gold Clusters in the Gas Phase*

A.P. Woodham, **A. Fielicke** in *Structure & Bonding: Gold Clusters, Colloids and Nano-Particles*. M. Mingos (Ed.), Springer (in press).

B4 *Endohedrally Doped Silicon Clusters*

N. Veldeman, P. Gruene, **A. Fielicke**, P. Claes, V. T. Ngan, M. T. Nguyen, P. Lievens, in *Handbook of Nanophysics Vol. 2: Clusters and Fullerenes*. K. Sattler (Ed.), Taylor & Francis (2010) pp. 5.1-15.

B3 *Vibrational Spectroscopy of Strongly Bound Clusters*

P. Gruene, J.T. Lyon, **A. Fielicke**, in *Handbook of Nanophysics Vol. 2: Clusters and Fullerenes*. K. Sattler (Ed.), Taylor & Francis (2010) pp. 9.1-14.

B2 *New Tools for Structure Elucidation in the Gas Phase: IR Spectroscopy of Bare and Doped Silicon Nanoparticles*

P. Gruene, J. T. Lyon, G. Meijer, P. Lievens, **A. Fielicke**, in *Ideas in Chemistry and Molecular Sciences: Advances in Nanotechnology, Materials and Devices*. B. Pignataro (Ed.), Wiley (2010) pp. 183-206.

B1 *Vibrational Spectroscopy of Gas-Phase Clusters and Complexes*

K. R. Asmis, **A. Fielicke**, G. von Helden, G. Meijer, in *The Chemical Physics of Solid Surfaces: Vol. 12, Atomic Clusters: From Gas Phase to Deposited*. P. Woodruff (Ed.), Elsevier (2007) pp. 327-375.

Articles in scientific journals (accepted)**Articles in scientific journals (published); h-index: 21**

73 *Communication: IR spectroscopy of neutral transition metal clusters through thermionic emission*
V.J.F. Lapoutre, M. Haertelt, G. Meijer, **A. Fielicke**, J. Bakker, *J. Chem. Phys.* 139 (2013) 121101.

72 *Small Platinum Cluster Hydrides in the Gas Phase*

C. Kerpál, D. Harding, D. M. Rayner, **A. Fielicke**^{*}, *J. Phys. Chem. A* 117 (2013) 8230.

71 *Not so loosely bound rare gas atoms: finite-temperature vibrational fingerprints of neutral gold-cluster complexes*

L.M. Ghiringhelli^{*}, P. Gruene, J.T. Lyon, D.M. Rayner, G. Meijer, **A. Fielicke**^{*}, M. Scheffler, *New J. Phys.*, 15 (2013) 083003.

70 *N₂ Activation by Neutral Ruthenium Clusters*

C. Kerpál, D. J. Harding, J. T. Lyon, G. Meijer, **A. Fielicke**^{*}, *J. Phys. Chem. C* 117 (2013) 12153.

69 *The structures of neutral transition metal doped silicon clusters, Si_nX (n = 6–9; X = V, Mn)*

P. Claes, V. T. Ngan, M. Haertelt, J. T. Lyon, **A. Fielicke**, M. T. Nguyen, P. Lievens, E. Janssens, *J. Chem. Phys.* 138 (2013) 194301.

- 68 *Unusual bonding in platinum carbido clusters*
D. J. Harding, C. Kerpál, G. Meijer, **A. Fielicke**^{*}, *J. Phys. Chem. Lett.* 4 (2013) 892.
- 67 *Structures of platinum oxide clusters in the gas phase*
C. Kerpál, D. J. Harding, A. C. Hermes, G. Meijer, S. R. Mackenzie^{*}, **A. Fielicke**^{*}, *J. Phys. Chem. A* 117 (2013) 1233.
- 66 *Vibrational Spectra and Structures of Neutral Si_mC_n Clusters (m+n=6): Sequential Doping of Silicon Clusters with Carbon Atoms*
M. Savoca, A. Lagutschenkov, J. Langer, D. J. Harding, **A. Fielicke**^{*}, O. Dopfer^{*}, *J. Phys. Chem. A* 117 (2013) 1158.
- 65 *Charge Separation Promoted Activation of Molecular Oxygen by Neutral Gold Clusters*
A. P. Woodham, G. Meijer, **A. Fielicke**^{*}, *J. Am. Chem. Soc.* 135 (2013) 1727.
- 64 *Incipient chemical bond formation of Xe to a cationic silicon cluster: Vibrational spectroscopy and structure of the Si₄Xe⁺ complex*
M. Savoca, J. Langer, D. J. Harding, O. Dopfer^{*}, **A. Fielicke**^{*}, *Chem. Phys. Lett.* 557 (2013) 49.
- 63 *Communication: Structure of Magnetic Lanthanide Clusters from Far-IR Spectroscopy: Tb_n⁺ (n=5-9)*
J. Bowlan^{*}, D. J. Harding, J. Jalink, A. Kirilyuk, G. Meijer, **A. Fielicke**, *J. Chem. Phys.* 138 (2013) 031102.
- 62 *High magnetic moments in manganese doped silicon clusters*
V. T. Ngan^{*}, E. Janssens, P. Claes, J.T. Lyon, **A. Fielicke**^{*}, M. T. Nguyen, P. Lievens^{*}, *Chem. Eur. J.* 18 (2012) 15788.
- 61 *Infra-red driven CO oxidation reactions on isolated platinum cluster oxides Pt_nO_m⁺*
A. C. Hermes, S. M. Hamilton, G. A. Cooper, C. Kerpál, D. J. Harding, G. Meijer, **A. Fielicke**^{*}, S. R. Mackenzie^{*}, *Faraday Discussions* 157 (2012) 213.
- 60 *Probing the Structures of Neutral Boron Clusters Using IR/VUV Two Color Ionization: B₁₁, B₁₆, and B₁₇*
C. Romanescu, D. Harding, **A. Fielicke**^{*}, L.-S. Wang^{*}, *J. Chem. Phys.* 137 (2012) 014317.
- 59 *The structures of small cationic gas-phase platinum clusters*
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- 58a *Activation of molecular oxygen by anionic gold clusters*
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see also: *Chemical & Engineering News*, 90(22) p. 36
- 58b *Aktivierung von molekularem Sauerstoff durch anionische Goldcluster*
A. P. Woodham, G. Meijer, **A. Fielicke**^{*}, *Angew. Chem.* 124 (2012) 4520.
- 57 *Gas-Phase Structures of Neutral Silicon Clusters*
M. Haertelt, J. T. Lyon,^{*} P. Claes, J. de Haeck, P. Lievens^{*}, **A. Fielicke**^{*}, *J. Chem. Phys.* 136 (2012) 064301.
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M. Haertelt, **A. Fielicke**^{*}, G. Meijer, K. Kwapien, M. Sierka^{*}, J. Sauer, *PCCP* 14 (2012) 2849.
- 55a *Activated Methane on Small Cationic Platinum Clusters*
D. J. Harding, C. Kerpál, G. Meijer, **A. Fielicke**^{*}, *Angew. Chem. Int. Ed.* 51 (2012) 817
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- 55b *Aktiviertes Methan auf kleinen Platinclusterkationen*
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- 54 *Effects of Co-Adsorbed Oxygen on the Infrared Driven Decomposition of N_2O on isolated Rh_5^+ Clusters*
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- 52 *Structure determination of anionic metal clusters via infrared resonance enhanced multiple photon electron detachment spectroscopy*
M. Haertelt, V. J. F. Lapoutre, J. M. Bakker, B. Redlich, D. J. Harding, **A. Fielicke**^{*}, G. Meijer, *J. Phys. Chem. Lett.* **2** (2011) 1720.
- 51 *Comment on: "Electronic Structures, Vibrational and Thermochemical Properties of Neutral and Charged Niobium Clusters Nb_n , $n=7-12$ "*
A. Fielicke^{*}, G. Meijer, *J. Phys. Chem. A* **115** (2011) 7869.
- 50 *Infrared-induced reactivity of N_2O on small gas-phase rhodium clusters*
S. M. Hamilton, W. S. Hopkins, D. J. Harding, T. R. Walsh, M. Haertelt, C. Kerpál, P. Gruene, G. Meijer, **A. Fielicke**^{*}, S. R. Mackenzie^{*}, *J. Phys. Chem. A* **115** (2011) 2489.
- 49a *Structural Diversity and Flexibility of MgO Gas-Phase Clusters*
K. Kwapien, M. Sierka^{*}, J. Döbler, J. Sauer, M. Haertelt, **A. Fielicke**^{*}, G. Meijer, *Angew. Chem. Int. Ed.* **50** (2011) 1716.
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- 48 *CO adsorption on neutral iridium clusters*
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- 47 *Probing the structures of gas-phase rhodium cluster cations by far-infrared spectroscopy*
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- 46 *Disparate Effects of Cu and V on Structures of Exohedral Transition Metal Doped Silicon Clusters: A Combined Far-Infrared Spectroscopic and Computational Study*
V. T. Ngan, P. Gruene, P. Claes, E. Janssens, **A. Fielicke**^{*}, M. T. Nguyen^{*}, P. Lievens^{*}, *J. Am. Chem. Soc.* **132** (2010) 15589.
- 45 *Ferrimagnetic cage-like Fe_4O_6 cluster: Structure determination from infrared dissociation spectroscopy*
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- 44 *Infrared spectroscopy and binding geometries of oxygen atoms bound to cationic tantalum clusters*
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- 43 *Far-Infrared Spectra of Yttrium-Doped Gold Clusters Au_nY , $n = 1 - 9$*
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- 42 *Intensity-resolved IR multiple photon ionization and fragmentation of C_{60}*
J. M. Bakker, V. J. F. Lapoutre, B. Redlich, J. Oomens, B. Sartakov, **A. Fielicke**, G. von Helden, G. Meijer, A. F. G. van der Meer, *J. Chem. Phys.* **132** (2010) 074305.

- 41 *Infrared Induced Reactivity on the Surface of Isolated Size-Selected Clusters: Dissociation of N₂O on Rhodium Clusters*
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- 40 *The Structure of Rh₈⁺ in the Gas Phase*
D. J. Harding, T. R. Walsh, S. M. Hamilton, W. S. Hopkins, S. R. Mackenzie, P. Gruene, M. Haertelt, G. Meijer, **A. Fielicke**^{*}, *J. Chem. Phys.* **132** (2010) 011101
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- 39 *Probing C–O bond activation on gas-phase transition metal clusters: Infrared multiple photon dissociation spectroscopy of Fe, Ru, Re, and W cluster CO complexes*
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- 38 *Vibrational spectroscopy of neutral silicon clusters via far-IR–VUV two color ionization*
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- 37 *The adsorption of CO on transition metal clusters: A case study of cluster surface chemistry*
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- 36 *The Structures of Silicon Cluster Cations in the Gas Phase*
J. T. Lyon, P. Gruene, **A. Fielicke**^{*}, G. Meijer, E. Janssens, P. Claes, P. Lievens, *J. Am. Chem. Soc.* **131** (2009) 1115.
- 35 *Nature of Ar bonding to small Co_n⁺ clusters and its effect on the structure determination by far-infrared absorption spectroscopy*
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- 34 *Fluxionality and σ -Aromaticity in Small Yttrium Doped Gold Clusters*
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- 33 *The Adsorption of CO on Group 10 (Ni, Pd, Pt) Transition Metal Clusters*
P. Gruene, **A. Fielicke**^{*}, G. Meijer, D. M. Rayner^{*}, *PCCP* **10** (2008) 6144.
- 32 *Molecular Adsorption of H₂ on Small Cationic Nickel Clusters*
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- 29 *The Effect of Charge on CO Binding in Rhodium Carbonyls: from Bridging to Terminal CO*
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- 27 *Experimental Vibrational Spectra of Tantalum Cluster Cations in the Gas Phase*
P. Gruene, **A. Fielicke**^{*}, G. Meijer, *J. Chem. Phys.* **127** (2007) 234307.
- 26 *The Far-Infrared Spectra of Neutral and Cationic Niobium Clusters: Nb₅^{0/+} to Nb₉^{0/+}*
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- 25 *Argon physisorption as structural probe for endohedrally doped silicon clusters*
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- 22 *Far-infrared spectroscopy of small neutral silver clusters*
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- 16 *Structure determination of small vanadium clusters by density-functional theory in comparison with experimental far-infrared spectra*
C. Ratsch^{*}, **A. Fielicke**, A. Kirilyuk, J. Behler, M. Scheffler, G. von Helden, G. Meijer, *J. Chem. Phys.* **122** (2005) 124302.
- 15 *Isomer selective infrared spectroscopy of neutral metal clusters*
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- 14 *Size and charge effects on the binding of CO to small isolated rhodium clusters*
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- 13 **A. Fielicke**, A. Kirilyuk, C. Ratsch, J. Behler, M. Scheffler, G. von Helden, G. Meijer, *Phys. Rev. Lett.* **93** (2004) 023401.
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- 11 *Photoionization of Nb₃CO and Nb₃(CO)₂: Is CO Molecularly or Dissociatively Adsorbed on Niobium?*
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- 6 *Structure determination of gas phase niobium and tantalum carbide nanocrystals via infrared spectroscopy*
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- 2 *Interaction of Bismuth Oxide Cluster Cations with Alkenes and Molecular Oxygen: $Bi_4O_6^+$, a Possible Reactive Center for Alkene Oxidation*
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- 1 *Tertiarybutylhydrazine: a new precursor for the MOVPE of Group III-nitrides*
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Other publications

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- Fascinerende structuren van gouden nanodeeltjes*
B. Redlich, A. Fielicke, *Nederlands Tijdschrift voor Natuurkunde*, **47** (2008) 426.
- Strukturaufklärung mit FELIX: Infrarot Spektroskopie von Molekülen und Clustern am Freie-Elektronen-Laser FELIX*
G. von Helden, A. Fielicke, G. Meijer, *Physik Journal* **4** (2005) 39.
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Invited Seminars (22)

- 22 *Vibrational Spectroscopy of Clusters with a Free Electron Laser: Insights into Structures and Reactions*
Dept. of Chemistry, John Hopkins University, Baltimore, USA, 09.08. 2013
- 21 *Vibrational Spectroscopy of Clusters with a Free Electron Laser: Studying Surface Chemistry en Miniature*
Dept. of Physics, Katholieke Universiteit Leuven, Belgium, 27. 10. 2010
- 20 *Vibrational Spectroscopy of Clusters with a Free Electron Laser: Studying Surface Chemistry en Miniature*
Dept. of Chemistry, University of Southern California, Los Angeles, USA, 13. 09. 2010
- 19 *Vibrational spectroscopy of metal cluster complexes: investigating the chemistry on a small surface*
Physical chemistry seminar, University of Georgia, Athens, USA, 28. 06. 2010
- 18 *From vibrations to electronic transitions and back...*
L.-S. Wang group seminar, Brown University, Providence, USA, 18. 06. 2010
- 17 *Vibrational spectroscopy of metal cluster complexes: investigating the chemistry on a small surface*
Dept. of Chemistry, Brown University, Providence, USA, 17. 06. 2010
- 16 *Spectroscopy of metal cluster complexes: studying chemistry on a small surface*
FOM Institute for Plasma Physics, Nieuwegein, The Netherlands, 21. 01. 2010
- 15 *Spectroscopy of metal cluster complexes: studying chemistry on a small surface*
Physical and Theoretical Chemistry Laboratory, University of Oxford, UK, 18. 01.2010
- 14 *Vibrational spectroscopy of metal cluster complexes: investigating the chemistry on a small surface.*
Cluster Research Laboratory, Toyota Technological Institute, Tokyo, Japan, 10. 12. 2009
- 13 *Gas-phase metal cluster complexes: chemistry on a small surface*
15. Treffen des Fachbeirates, Fritz-Haber-Institut der MPG, Berlin, Germany, 23. 11. 2009
- 12 *Gas-phase metal cluster complexes: surface chemistry en miniature*
GDCh Kolloquium, Universität Ulm, Germany, 25. 6. 2009
- 11 *Vibrational spectroscopy of isolated metal cluster complexes with a Free Electron Laser*
Institut für Chemie, Humboldt-Universität zu Berlin, Germany, 16. 2. 2009
- 10 *Vibrational spectroscopy of isolated metal cluster complexes with a Free Electron Laser*
Helmholtz Center Berlin for Materials and Energy, Dept. of Silicon Photovoltaics, Berlin, Germany, 30. 10. 2008
- 9 *Vibrational spectroscopy of isolated metal cluster complexes with a Free Electron Laser*
University of Utrecht, Dept. of Inorganic Chemistry and Catalysis, Utrecht, NL, 7. 10. 2008
- 8 *Vibrational spectroscopy of isolated metal cluster complexes with a Free Electron Laser*
Dept. of Chemistry, University of Cambridge, UK, 26. 8. 2008
- 7 *Structure and surface chemistry of metal clusters*
Institut für Physikalische Chemie, Universität Stuttgart, Germany, 3. 7. 2007
- 6 *IR multiple photon absorption spectroscopy for structure determination of clusters and cluster complexes*
Steacie Institute for Molecular Sciences, NRC Canada, Ottawa, 3. 5. 2005
- 5 *Vibrational spectroscopy of isolated metal clusters and metal cluster complexes*
Fachbereich Physik, AG Wöste, FU Berlin, Germany, 19. 1. 2005
- 4 *Probing the structures of pure metal clusters and metal cluster complexes*
SFB 450: Analyse und Steuerung ultraschneller photoinduzierter Reaktionen. FU Berlin, Germany, 3. 2. 2004
- 3 *IR spectroscopy of metal cluster complexes with FELIX*
University of Utrecht, Dept. of Inorganic Chemistry and Catalysis, Utrecht, NL, 27. 2. 2004

- 2 *Struktur und Reaktivität kleiner Cluster - IR-Mehrphotonen-Spektroskopie*
Institut für Physikalische Chemie der Universität Hamburg, Germany, Apr. 2003
- 1 *Alkene Oxidation on Metal Oxide Clusters: Model Systems for Active Centers*
FOM Institute for Plasma Physics Rijnhuizen, Nieuwegein, NL, Mai 2001

Talks at conferences (43 total, 24 invited)

- 43 *Vibrational spectroscopy of metal cluster complexes: investigating the chemistry on a small surface (invited)*
Gordon Research Conference on Molecular and Ionic Clusters, Lucca (Barga), Italy, 27.04.-2.5.2014
- 42 *(invited)*
Gas Phase Model Systems for Catalysis - GPMC 2014, Ulm, Germany, 7.-9. 4. 2014
- 41 *(invited)*
International Symposium on Clusters, Cluster Assemblies and Nano-scale Materials – ISCANM III, Allahabad, India, 11.-14. 03. 2014
- 40 *Shedding IR light on gas-phase metal clusters: insights into structures and reactions (invited)*
Biannual meeting of the German speaking cluster physicists, Herzogenhorn, Germany, 6.-11. 10. 2013
- 39 *Clusters of the platinum group metals: insights from IR spectroscopy into structures and reactions (invited)*
7th International Conference on the Theory of Atomic and Molecular Clusters (TAMC VII)
Birmingham, UK, 15.-20. 09. 2013
- 38 *Shedding IR light on gas phase metal clusters: insights into structures and reactions (invited)*
XX International Materials Research Congress, Cancun, Mexico, 11.-16. 08.2013
- 37 *Vibrational spectroscopy of metal cluster complexes: investigating the chemistry on a small surface (invited)*
International Symposium on Atomic Cluster Collisions - ISACC 2013, Wuhan, China, 18.-23.07.2013
- 36 *Vibrational spectroscopy of metal cluster complexes: investigating the chemistry on a small surface (invited)*
ECAMP11, Aarhus, Denmark, 24.-28. 06. 2013
- 35 *Structures of magnetic lanthanide clusters from far-IR spectroscopy*
112. Hauptversammlung der Deutschen Bunsengesellschaft für Physikalische Chemie, Karlsruhe, Germany, 9.-11. 05. 2013
- 34 *Size selective vibrational spectroscopy of strongly bound neutral clusters (invited)*
DPG Spring Meeting, Hannover, Germany, 18.-22. 3. 2013
- 33 *Structure determination of free metal clusters via far-infrared vibrational spectroscopy (Hot Topic)*
Symposium on Size Selected Clusters (S3C) 2013, Davos, Switzerland, 4.-08. 3. 2013
- 32 *Structure and Dynamics of Pure and Doped Silicon Clusters (invited)*
International Workshop of the Research Unit 1282 “Controlling the Electronic Structure of Semiconductor Nanoparticles by Doping and Hybrid Formation”, Berlin, Germany, 18.-19. 10. 2012
- 31 *Vibrational spectroscopy of metal cluster complexes: investigating the chemistry on a small surface (invited)*
CRC-FHI Joint Meeting “Complex Surfaces in Material Science”, Berlin, Germany, 20.-21. 09. 2012
- 30 *Vibrational spectroscopy of metal cluster anions via IR-MPED using an intra-cavity FEL (Hot Topic)*
International Symposium on Small Particles and Inorganic Clusters (ISSPIC) 16, Leuven, Belgium, 08.-13. 7. 2012

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- 29 *Structure determination of free metal clusters via far-infrared vibrational spectroscopy (invited)*
CECAM workshop on “Theoretical challenges in electronic structure of clusters and nanoparticles”,
Lausanne, Switzerland, 04.-06. 07. 2012
 - 28 *IR spectroscopy and surface chemistry of platinum clusters*
111. Hauptversammlung der Deutschen Bunsengesellschaft für Physikalische Chemie, Leipzig,
Germany, 17.-19. 05. 2012
 - 27 *Probing the structure and chemistry of gas-phase transition metal clusters with infrared spectroscopy (invited)*
Gordon Research Conference “Clusters, Nanocrystals & Nanostructures” 5, Mount Holyoke College,
USA, 24.-29. 07. 2011
 - 26 *Shedding IR light on gas phase metal clusters: insights into structures and reactions (invited)*
Fifth International Symposium "Atomic Cluster Collisions" (ISACC 2011), Berlin, Germany, 20.-25.
07. 2011
 - 25 *Shedding IR light on gas phase clusters: structures and reactions (invited)*
Joint International Symposium of the Collaborative Research Center 546 and the Cluster of
Excellence UNICAT, Erkner, Germany, 20.-23. 02. 2011
 - 24 *Vibrational spectroscopy of metal cluster complexes: investigating the chemistry on a small surface (invited)*
International Symposium on Small Particles and Inorganic Clusters (ISSPIC) 15, Oaxaca, Mexico,
19.-24. 09. 2010
 - 23 *Size selective far-infrared spectroscopy of transition metal clusters in a molecular beam (invited)*
65th International Symposium on Molecular Spectroscopy, Columbus, Ohio, USA, 21.-25. 06. 2010
 - 22 *The adsorption of CO on transition metal clusters: A case study of cluster surface chemistry*
109. Hauptversammlung der Deutschen Bunsengesellschaft für Physikalische Chemie, Bielefeld,
Germany, 13.-15. 05. 2010
 - 21 *Gas-phase metal cluster complexes: surface chemistry at the small scale (invited)*
Hokkaido University CRC International Symposium on “Innovation Driven by Catalysis-past,
present and future” – dedicated to the 20th anniversary of CRC Center, Sapporo, Japan, 7.-9. 12.
2009
 - 20 *The structures of neutral gold clusters (Hot Topic)*
Symposium on Size Selected Clusters (S3C) 2009, Brand, Austria, 9.-13. 3. 2009
 - 19 *Experimental probes for the structures of neutral gold clusters (Hot Topic)*
International Symposium on Small Particles and Inorganic Clusters (ISSPIC) 14, Valladolid, Spain,
15.-19. 9. 2008
 - 18 *Experimental probes for the structures of neutral gold clusters (Hot Topic)*
Gordon Research Conference “Molecular and Ionic Clusters”, Aussios, France, 7.-12. 09. 2008
 - 17 *Vibrational spectroscopy of isolated metal clusters with a Free Electron Laser (invited)*
DPG Spring Meeting, Darmstadt, Germany, 11. 3. 2008
 - 16 *Doped clusters in light of an infrared Free Electron Laser (invited).*
Frühjahrstagung der Deutschen Physikalischen Gesellschaft, Berlin, Germany, 28. 2. 2008
 - 15 *Probing the structures of pure metal clusters and metal cluster complexes (invited)*
FEL Workshop "Horizons in Vibrational Spectroscopy with Free Electron Lasers", Schloß Ringberg
am Tegernsee, Germany, 21.-24. 2. 2007
 - 14 *Probing the structures of pure metal clusters and metal cluster complexes (invited)*
CECAM workshop on “Catalysis from First Principles”, Lyon, France, 11.-14. 9. 2006
 - 13 *Hydrogen complexes of transition metal clusters and the effect of H coverage on the dissociative vs. non-dissociative chemisorption of CO (Hot Topic)*
International Symposium on Small Particles and Inorganic Clusters (ISSPIC) 13, Gothenburg,
Sweden, 23.-28. 7. 2006

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- 12 *Probing the structures of pure metal clusters and metal cluster complexes (invited)*
Annual conference of the Spectroscopy and Dynamics Interest Group of the RSC Faraday Division, Durham, UK, 19.-21. 12. 2005
 - 11 *Strukturbestimmung von Metallclustern und Cluster-Komplexen mittels IR-Mehrphotonen-Dissoziations-Spektroskopie (invited)*
CFN-Symposium: Cluster als molekulare Nanostrukturen, Bad Herrenalb, Germany, 11.-16. 9. 2005
 - 10 *Gold Cluster Carbonyls: Saturated adsorption of CO on gold clusters, vibrational spectroscopy and implications for the clusters structures.*
DPG Spring Meeting, Berlin, Germany, 4. 3. 2005
 - 9 *Structure determination of isolated metal clusters via far-infrared spectroscopy*
Fifth European Cluster Cooling Network Workshop (ECCN2004), Rothesay, Isle of Bute, Scotland, Juni 2004
 - 8 *Strukturbestimmung isolierter Metallcluster mittels Ferninfrarot-Spektroskopie*
103. Hauptversammlung der Deutschen Bunsengesellschaft für Physikalische Chemie, Dresden, Germany, 20.-22. 5. 2004
 - 7 *Strukturbestimmung isolierter Metallcluster mittels Ferninfrarot-Spektroskopie*
DPG Spring Meeting, München, Germany, 22. 5. 2004
 - 6 *Cooking clusters with FELIX*
Workshop of the Department of Molecular Physics of the Fritz-Haber-Institute, Schloß Ringberg, Germany, 16. 2. 2004
 - 5 *Cluster Adsorbate Complexes: IR Multiple Photon Spectroscopy of Metal Cluster Complexes*
312. Wilhelm und Else Heraeus Seminar „Freie und deponierte Cluster“, Brand, Austria, 7. 10. 2003
 - 4 *Infrared multiple photon dissociation spectroscopy of clusters and cluster adsorbate complexes*
27th annual conference of the Atomic, Molecular and Optical Physics Division of the Dutch Physical Society (NNV), Lunteren, The Netherlands, Nov. 2002
 - 3 *Infrared spectroscopy of transition metal oxide clusters*
Third European Cluster Cooling Network Workshop (ECCN2002), Strasbourg, France, Sept. 2002
 - 2 *Alkene Oxidation on Metal Oxide Clusters: Model Systems for Active Centers*
4th World Congress on Oxidation Catalysis, Potsdam, Germany, Sept. 2001
 - 1 *Streuung von Vanadiumoxid-Clusterkationen an Gastargets*
Jahrestreffen des SFB 546 "Struktur, Dynamik und Reaktivität von Übergangsmetalloxid-Aggregaten" Berlin, Germany, Sept. 2000