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## Publications

**An approach for patterned molecular adsorption on ferromagnets, achieved via Moiré superstructures**

Jensen, S., Løge, I. A., Bendix, J. & Diekhöner, L., 22 Apr 2024, In: Physical Chemistry Chemical Physics. 26, 18, p. 13710 - 13718 9 p.

**Mapping nanoscale carrier confinement in polycrystalline graphene by terahertz spectroscopy**

Whelan, P. R., De Fazio, D., Pasternak, I., Thomsen, J. D., Zelzer, S., Mikkelsen, M. O., Booth, T. J., Diekhöner, L., Sassi, U., Johnstone, D., Midgley, P. A., Strupinski, W., Jepsen, P. U., Ferrari, A. C. & Bøggild, P., 7 Feb 2024, In: Scientific Reports. 14, 1, 3163.

**Unraveling the electronic structure of cobalt oxide nanoislands on Au(111)**

Ørsted, A., Salling, S. V. & Diekhöner, L., 26 Oct 2023, In: Physical Review B (Condensed Matter and Materials Physics). 108, 16, 165424.

**The magnetic field strength and the force distance dependency of the magnetically controlled growing rods used for early onset scoliosis**

Diekhöner, L., Meyer, C. S. & Eiskjær, S. P., 21 Feb 2023, In: Scientific Reports. 13, 1, 3045.

**Continuous durability study of a high temperature polymer electrolyte membrane fuel cell stack**

Batet, D., Tuz Zohra, F., Kristensen, S. B., Juhl Andreasen, S. & Diekhöner, L., 1 Nov 2020, In: Applied Energy. 277, 115588.

**Charge state control of F16CoPc on h-BN/Cu(111)**

Pörtner, M., Wei, Y., Riss, A., Seufert, K., Garnica, M., Barth, J., Seitsonen, A. P., Diekhöner, L. & Auwärter, W., 6 Aug 2020, In: Advanced Materials Interfaces. 7, 15, 2000080.

**Co(CO)<sub>n</sub>/Cu(001): Towards understanding chemical control of the Kondo effect**

Bahlke, M. P., Wahl, P., Diekhöner, L. & Herrmann, C., 1 Apr 2019, In: Journal of Applied Physics. 125, 14, 13 p., 142910.

**An extended chiral surface coordination network based on Ag<sub>7</sub>-clusters**

Svane, K. L., Babiloniaei, M. S., Hammer, B. & Diekhöner, L., 28 Oct 2018, In: Journal of Chemical Physics. 149, 16, 10 p., 164710.

**From self-assembly to metal-organic coordination: Trimesic acid on Ag(111)**

Diekhöner, L., Babiloniaei, M. S., Kiel, S. & Gastaldo, M., 2016.

**Molecular self-assembly at nanometer scale modulated surfaces: Trimesic acid on Ag(111), Cu(111) and Ag/Cu(111)**  
Baviloliaei, M. S. & Diekhöner, L., 2014, In: Physical Chemistry Chemical Physics. 16, p. 11265 - 11269

**Quantum transport through single atoms and molecules**

Vitali, L., Wahl, P., Ohmann, R., Bork, J., Zhang, Y., Diekhöner, L. & Kern, K., 2013, In: IPPS physica status solidi (b). 250, 11, p. 2437-2443

**A tunable two-impurity Kondo system in an atomic point contact**

Bork, J., Zhang, Y., Diekhöner, L., Borda, L., Simon, P., Kroha, J., Wahl, P. & Kern, K., 2011, In: Nature Physics. 7, p. 901-906

**Local spectroscopy of the Kondo lattice YbAl<sub>3</sub>: Seeing beyond the surface with scanning tunneling microscopy and spectroscopy**

Wahl, P., Diekhöner, L., Schneider, M. A., Treubel, F., Lin, C. T. & Kern, K., 2011, In: Physical Review B (Condensed Matter and Materials Physics). 84, 24, p. 245131 7 p.

**Electronic structure and ordering of multilayers of Co and Ag on Cu(111) investigated by photoelectron spectroscopy**

Bork, J., Diekhöner, L., Li, Z. & Onsgaard, J., 2010, In: Surface Science. 604, 17-18, p. 1536-1541 6 p.

**Growth and structure of Ag on bilayer Co nanoislands on Cu(111)**

Bork, J., Onsgaard, J. & Diekhöner, L., 2010, In: Journal of Physics: Condensed Matter. 22, p. 135005

**Potential energy landscape of metallic Moiré patterns**

Bork, J., Wahl, P., Diekhöner, L. & Kern, K., 29 Nov 2009, In: New Journal of Physics. 11, p. 113051 10 p.

**Kondo-effect of substitutional cobalt impurities at copper surfaces**

Wahl, P., Seitsonen, A., Diekhöner, L., Schneider, M. A. & Kern, K., 2009, In: New Journal of Physics. 11, p. 113015 9 p.

**Background removal in scanning tunneling spectroscopy of single atoms and molecules on metal surfaces**

Wahl, P., Diekhöner, L., Schneider, M. A. & Kern, K., 2008, In: Review of Scientific Instruments. 79, 4, p. 043104 4 p.

**Bilayer growth of nanoscale Co islands on Cu(111)**

Negulyaev, N. N., Stepanyuk, V. S., Bruno, P., Diekhöner, L., Wahl, P. & Kern, K., 2008, In: Physical Review B. Condensed Matter and Materials Physics. 77, 12, p. 125437

**Electrical, optical and magnetic properties of nanostructures**

Pedersen, T. G. & Diekhöner, L., 2008, 138 p.

**Exchange Interaction between Single Magnetic Adatoms**

Wahl, P., Simon, P., Diekhöner, L., Stepanyuk, V. S., Bruno, P., Schneider, M. A. & Kern, K., 2 Feb 2007, In: Physical Review Letters. 98, 5, p. 056601 4 p.

**Local measurement of hot-electron phase-coherence at metal surfaces**

Schneider, M. A., Wahl, P., Vitali, L., Diekhöner, L., Vogelgesang, R. & Kern, K., 2007, In: Applied Physics A: Materials Science & Processing. 88, 3, p. 443-447

**Ordered Au(111) layers on Si(111)**

Silva, A., Pedersen, K., Diekhöner, L., Morgen, P. & Li, Z., 2007, In: Journal of Vacuum Science & Technology. A: International Journal Devoted to Vacuum, Surfaces, and Films. 25, 4, p. 908-911

**Lifetime of spin-polarized surface state electrons**

Diekhöner, L., Vogelgesang, R., Wahl, P., Schneider, M. A. & Kern, K., 2006, *Symposium on Surface Science 2006*. Aumayr, F. & Varga, P. (eds.). Institut für Allgemeine Physik, Technische Universität Wien, p. 36-37 2 p.

**Wahl et al. reply. A Reply to the Comment by S. Crampin et al.. © 2005 The American Physical Society**

Wahl, P., Schneider, M. A., Diekhöner, L., Vogelgesang, R. & Kern, K., 8 Jul 2005, In: Physical Review Letters. 95, 2, 029702.

**Kondo Effect of Co Adatoms on Ag Monolayers on Noble Metal Surfaces**

Schneider, M. A., Wahl, P., Diekhöner, L., Vitali, L., Wittich, G. & Kern, K., 2005, In: Japanese Journal of Applied Physics. 44, 7B, p. 5328-5331

**Kondo effect of molecular complexes at surfaces: Ligand control of the local spin coupling**

Wahl, P., Diekhöner, L., Wittich, G., Vitali, L., Schneider, M. A. & Kern, K., 2005, In: Physical Review Letters. 95, 16, p. 166601

**Kondo state of Co impurities at noble metal surfaces**

Schneider, M. A., Vitali, L., Wahl, P., Knorr, N., Diekhöner, L., Wittich, G., Vogelgesang, M. & Kern, K., 2005, In: Applied Physics A: Materials Science & Processing. 80, 5, p. 937-941

**Phase coherence length and quantum interference patterns at step edges - Wahl et al. reply**

Wahl, P., Schneider, M. A., Diekhöner, L., Vogelgesang, R. & Kern, K., 2005, In: Physical Review Letters. p. 029702-

**Scattering of image-potential state electrons by steps on Cu(001)**

Roth, M., Weinelt, M., Fauster, T., Wahl, P., Schneider, M. A., Diekhöner, L. & Kern, K., 1 Jan 2004, In: Applied Physics A: Materials Science & Processing. 78, 2, p. 155-159 4 p.

**Kondo temperature of magnetic impurities at surfaces**

Wahl, P., Diekhöner, L., Schneider, M. A., Vitali, L., Wittich, G. & Kern, K., 2004, In: Physical Review Letters. 93, p. 176603

**Surface step structure of Ag<sub>13</sub> Os O<sub>6</sub> experimental evidence for Ag<sub>13</sub> cluster building blocks**

Ahlert, S., Diekhöner, L., Sordan, R., Kern, K. & Jansen, M., 2004, In: Chemical Communications. 4, p. 462-463

**Quantum coherence of image potential states**

Wahl, P., Schneider, M. A., Diekhöner, L., Vogelgesang, R. & Kern, K., 2003, In: Physical Review Letters. 91, p. 106802

**Spin polarized surface states of cobalt nanoislands on Cu(111)**

Diekhöner, L., Schneider, M. A., Wahl, P., Baranov, A. N., Stepanyuk, V. S., Bruno, P. & Kern, K., 2003, *AIP Conference Proceedings 696: 12th International Conference on Scanning Tunneling Microscopy/Spectroscopy and Related Techniques*. 53 ed. p. 53-59 7 p.

**State resolved inelastic scattering of N<sub>2</sub> from Ru(0001)**

Mortensen, H., Jensen, E., Diekhöner, L., Baurichter, A., Luntz, A. C. & Petrunin, V. V., 2003, In: Journal of Chemical Physics. 118, p. 11200-11209

**Surface states of cobalt nanoislands on Cu(111)**

Diekhöner, L., Schneider, M. A., Baranov, A. N., Stepanyuk, V. S., Bruno, P. & Kern, K., 2003, In: Physical Review Letters. 90, p. 236801-

**CH<sub>4</sub> dissociation on Ru(0001): A view from both sides of the barrier**

Mortensen, H., Diekhöner, L., Baurichter, A. & Luntz, A. C., 2002, In: Journal of Chemical Physics. 116, p. 5781-5794

**Indirect evidence for strong non-adiabatic coupling in N<sub>2</sub> associative desorption from and dissociative adsorption on Ru(0001)**

Diekhöner, L., Hornekær, L., Mortensen, H., Jensen, E., Baurichter, A., Petrunin, V. V. & Luntz, A. C., 2002, In: Journal of Chemical Physics. 117, 10, p. 5018-5030

Kondo effect of single Co atoms on Cu surfaces

Knorr, N., Schneider, M. A., Diekhöner, L., Wahl, P. & Kern, K., 2002, In: Physical Review Letters. 88, 9, p. 0968041

Dynamic displacement of N<sub>2</sub> from Ru(0001) by incident D and H atoms

Diekhöner, L., Mortensen, H., Åkerlund, C., Baurichter, A. & Luntz, A. C., 2001, In: Journal of Chemical Physics. 114, p. 4215-4220

Laser Assisted Associative Desorption of N<sub>2</sub> and CO from Ru(0001)

Diekhöner, L., Mortensen, H., Baurichter, A. & Luntz, A. C., 2001, In: Journal of Chemical Physics. 115, p. 3356-3373

N<sub>2</sub> dissociative adsorption on Ru(0001): the role of energy loss

Diekhöner, L., Mortensen, H., Baurichter, A., Jensen, E., Petrunin, V. V. & Luntz, A. C., 2001, In: Journal of Chemical Physics. 115, p. 9028-9035

Dynamics of ammonia decomposition on Ru(0001)

Mortensen, H., Diekhöner, L., Baurichter, A., Jensen, E. & Luntz, A. C., 22 Oct 2000, In: Journal of Chemical Physics. 113, 6, p. 6882-6887

Observation of metastable atomic nitrogen adsorbed on Ru(0001)

Diekhöner, L., Baurichter, A., Mortensen, H. & Luntz, A. C., 1 Feb 2000, In: Journal of Chemical Physics. 112, 5, p. 2507-2515

Coverage dependence of activation barriers: Nitrogen on Ru(0001)

Diekhöner, L., Mortensen, H., Baurichter, A. & Luntz, A. C., 2000, In: Journal of Vacuum Science & Technology. A: International Journal Devoted to Vacuum, Surfaces, and Films. 18, 4, p. 1509-1513

Dynamics of High Barrier Gas-surface Reactions studied by Laser Assisted Associative Desorption

Diekhöner, L., 2000, SDU-Odense Universitet: Fysisk Institut.

Dynamics of high barrier surface reactions: Laser Assisted Associative Desorption of N<sub>2</sub> from Ru(0001)

Diekhöner, L., Baurichter, A., Mortensen, H., Luntz, A. C. & Hammer, B., 2000, In: Physical Review Letters. 84, 21, p. 4906-4909

Parallel pathways in methanol decomposition on Pt(111)

Diekhöner, L., Butler, D. A., Baurichter, A. & Luntz, A. C., 1998, In: Surface Science. 409, p. 384-391

## Press clippings

### **An extended chiral surface coordination network based on Ag<sub>7</sub>-clusters**

Katrine L. Svane, Mahdi Sadeghzadeh Babiloliaei, Bjørk Hammer & Lars Diekhöner

18/10/2018

1 item of Media coverage

### **Hvordan kan man afskærme magnetfelter?**

Lars Diekhöner

15/12/2013

1 item of Media coverage

### **Aalborg-forskere kaster nyt lys over koboltatomer**

Lars Diekhöner

09/09/2011

2 items of Media coverage

