

PUBLICATIONS J.W.M. Frenken

Note: A significant fraction of this lists originates from Joost Frenken's time at Leiden University, where he headed the Interface Physics Group until the end of 2017. This group has more publications, patents and patent applications than you find here; these are not incorporated in this list, as Frenken runs a strict policy of avoiding 'automatic' co-author- and ownerships.

Books and Book Chapters

- 15 **Operando studies in heterogeneous catalysis**
Book, Eds. I.M.N. Groot and J.W.M. Frenken, (Springer-Verlag, Berlin, Heidelberg, 2017).
- 14 **Live observations of catalysts using high-pressure scanning probe microscopy**
J.W.M. Frenken and I.M.N. Groot
Book chapter, in *Operando studies in heterogeneous catalysis*, Eds. I.M.N. Groot and J.W.M. Frenken, (Springer-Verlag, Berlin, Heidelberg, 2017), Chapter 1.
- 13 **Experimental observations of superlubricity and thermolubricity**
M. Dienwiebel and J.W.M. Frenken
Book chapter (invited), in *Fundamentals of Friction and Wear on the Nanoscale*, Eds. E. Gnecco and E. Meyer, (Springer-Verlag, Switzerland, 2015), Chapter 8.
- 12 **In-situ materials characterization across spatial and temporal scales**
Book, Eds. A. Ziegler, J.W.M. Frenken, H. Graafsma and X.F. Zhang, (Springer-Verlag, Berlin, Heidelberg, 2014).
- 11 **Scanning tunneling microscopy at elevated pressure: operando observations of model catalysts**
J.W.M. Frenken
Book chapter (invited) in *In-Situ Materials Characterization Across Spatial and Temporal Scales*, Eds. A. Ziegler, J.W.M. Frenken, H. Graafsma and X.F. Zhang, (Springer-Verlag Berlin, Heidelberg, 2014), Chapter 6.
- 10 **The physics of atomic-scale friction: basic considerations and open questions**
S.Yu. Krylov and J.W.M. Frenken
Book chapter (invited) in the book series *Surface and Interface Science, Vol. 4, Solid-Solid Interfaces and Thin Films*, Ed. K. Wandelt, (Wiley-VCH, 2013), Chapter 30.
- 9 **Graphene formation on metal surfaces investigated by *in-situ* STM**
G.C. Dong, D.W. van Baarle and J.W.M. Frenken
Book chapter (invited) in *Advances in Graphene Science*, Ed. Mahmood Aliofkhazraei, (InTech, 2013), Chapter 2 (ISBN: 978-953-51-1182-5, InTech, DOI: 10.5772/56435).
- 8 **Microscale friction reduction by normal force modulation in MEMS**
W.M. van Spengen, G.H.C.J. Wijts, V. Turq and J.W.M. Frenken
Book chapter (invited) in *Adhesion Aspects in MEMS-NEMS*, Eds. S.H. Kim, M.T. Dugger, K.L. Mittal, (Brill Acad. Publ., 2011), p. 339-350.
- 7 **Experimental observations of superlubricity and thermolubricity**
M. Dienwiebel and J.W.M. Frenken
Book chapter (invited) in *Fundamentals of Friction and Wear on the Nanoscale*, Eds. E. Gnecco and E. Meyer, (Springer-Verlag, Berlin, 2007). p.159-176.
- 6 **Diffusion of vacancies in metal surfaces: theory and experiment**
R. van Gastel, J.W.M. Frenken, B.S. Swartzentruber, E. Somfai and W. van Saarloos
Book chapter (invited) in *The Chemical Physics of Solid Surfaces, Vol. 11, Surface Dynamics*, Ed. D.P. Woodruff, (Elsevier, Amsterdam, 2003), p. 351-370.
- 5 **Microscopen met nanoschaalresolutie**
J.W.M. Frenken, C.A.J. Putman, C.G. Figdor, B.G. de Grooth, I.M. Peters, M.L. Bennink, J. Greve, N.F. van Hulst en A. ten Wolde,
Translation of book chapter (invited) in *Natuur & Techniek: Nanotechnologie. Op weg naar een moleculaire bouwdoos*, Ed. A. ten Wolde (2000), 220-255. (not refereed)

- 4 **Scanning tunneling microscopy**
J.W.M. Frenken
Book chapter (invited) in *Nanotechnology. Towards a molecular construction kit*. Ed. A. ten Wolde (1998) 289.
- 3 **Surface melting: an experimental overview**
J.W.M. Frenken and H.M. van Pinxteren
Book chapter (invited) in *The Chemical Physics of Solid Surfaces, Vol. 7, Phase Transitions and Adsorbate Restructuring at Metal Surfaces*, Eds. D.A. King and D.P. Woodruff, (Elsevier, Amsterdam, 1994), Chapter 7 (p. 259).
- 2 **Quasielastic He-atom scattering studies of adatom diffusion on surfaces**
J.W.M. Frenken and B.J. Hinch,
Book chapter (invited) in *He Atom Scattering: from Surfaces*, Ed. E. Hulpke, (Springer-Verlag, Heidelberg, 1992), Chapter 12, (p. 287).
- 1 **Structure, dynamics, and melting of metal surfaces**
J.W.M. Frenken
Ph.D. Thesis: Utrecht University, June, 1986.

Review articles

- 18 **Tunable superlubricity of 2-dimensional materials**
D. Bonn and J.W.M. Frenken
Commentary (invited), *Proc.Nat.Acad.Sci.* **116** (2019) 24386.
- 17 **Seeing dynamic phenomena with live scanning tunneling microscopy**
J.W.M. Frenken and I.M.N. Groot
Review article (invited), *MRS Bulletin* **42** (2017) 834.
- 16 **High-pressure operando STM studies giving insight in CO oxidation and NO reduction over Pt(110)**
M.A. van Spronsen, G.J.C. van Baarle, C.T. Herbschleb, J.W.M. Frenken and I.M.N Groot,
Review article (invited), *Catalysis Today* **244** (2015) 85; *ibid*, Erratum, *Catalysis Today* **256** (2015) 384.
- 15 **The physics of atomic-scale friction: basic considerations and open questions**
S.Yu. Krylov and J.W.M. Frenken
Review article (invited), *Phys. Status Solidi B* **251** (2014) 711; *this article has also appeared as a book chapter (see item 10 in list Books and Book Chapters)*.
- 14 **Microscopy: when mica and water meet**
J.W.M. Frenken and T.H. Oosterkamp,
Review article (invited News and Views article), *Nature* **464** (2010) 38.
- 13 **Video-rate scanning probe control challenges: setting the stage for a microscopy revolution**
M.J. Rost, G.J.C. van Baarle, A.J. Katan, W.M. van Spengen, P. Schakel, W.A. van Loo, T.H. Oosterkamp and J.W.M. Frenken
Review article (invited), *Asian. J. Control.* **11** (2009) 110.
- 12 **The Reactor-STM, a real-space, in-situ probe for nano-catalysis**
J.W.M. Frenken and B.L.M. Hendriksen,
Review article (invited), *MRS Bulletin* **32** (2007) 1015.
- 11 **Bringing friction to a halt**
J.W.M. Frenken
Review article (invited News and Views article), *Nature Nanotechnology* **1** (2006) 20.
- 10 **Looking at heterogeneous catalysis at atmospheric pressure using tunnel vision**
B.L.M. Hendriksen, S.C. Bobaru and J.W.M. Frenken
Review article (invited), *Topics in Catalysis* **36** (2005) 43.
- 9 **Bistability and oscillations in CO oxidation studied with scanning tunnelling microscopy inside a reactor**
B.L.M. Hendriksen, S.C. Bobaru and J.W.M. Frenken
Review article (invited), *Catalysis Today* **105** (2005) 234.

- 8 **Pushing the limits of SPM**
J.W.M. Frenken, T.H. Oosterkamp, B.L.M. Hendriksen and M.J. Rost
Review article (invited), *Materials Today* **May 2005**, 20.
- 7 **Slippery Nanoworld**
E. Gnecco, A. Socoliuc, E. Meyer, A. Baratoff, R. Bennewitz, M. Dienwiebel and J.W.M. Frenken
Review article (invited), *Europhysics News* **36** (2005) 6.
- 6 **Diffusion on and in surfaces: the atomic slide puzzle**
J.W.M. Frenken, R. van Gastel, S.B. van Albada, E. Somfai and W. van Saarloos
Collective Diffusion on Surfaces: Correlation Effects and Adatom Interactions, Eds. M.C. Tringides and Z. Chvoj,
Nato Science Series II. Mathematics, Physics and Chemistry **29** (2001) 191.
- 5 **Surface energetics and dynamics measured from STM movies**
M.S. Hoogeman, D. C. Schlößer, J.B. Sanders, L. Kuipers, M.F. Chang, M.A.J. Klik, D. Glastra van Loon, R.W.M. Loos, J.J. van der Linden and J.W.M. Frenken
Proceedings NATO Advanced Study Institute on Surface Diffusion: Atomistic and collective processes, August-September 1996, Rhodes, Greece, Ed. M. Tringides, Plenum Press, NY, 1997, p. 463-474
- 4 **Surface melting: dry, slippery, wet and faceted surfaces**
J.W.M. Frenken and H.M. van Pinxteren
Surface Sci. **307-309** (1994) 728. (Proceedings ECOSS-13)
- 3 **New views on surface melting obtained with STM and ion scattering**
J.W.M. Frenken, H.M. van Pinxteren and L. Kuipers
Surface Sci. **283** (1993) 283. (Proceedings DPSS'92)
- 2 **Experimental investigations of surface melting**
J.W.M. Frenken, J.P. Toennies, Ch. Wöll, B. Pluis, A.W. Denier van der Gon and J.F. van der Veen
Proceedings ICSOS-II, Springer Series in Surface Science, Eds. J.F. van der Veen and M.A. Van Hove, (Springer, Heidelberg, 1988) 545.
- 1 **Ion beam crystallography of solid and molten surfaces**
J.F. van der Veen and J.W.M. Frenken
in: *Festkörperprobleme (Advances in Solid State Physics)*, Vol XXV, p. 523, Ed. P. Grosse, Vieweg, Braunschweig, 1985.

Published and accepted papers (in refereed journals and refereed conference proceedings)

- 177 **Response to Comment on “On the origin of frictional energy dissipation”, by B.N.J. Persson**
R. Hu, S.Yu. Krylov and J.W.M. Frenken
Trib. Lett. **68** (2020) 35.
- 176 **Effect of rubidium incorporation on the optical properties and intermixing ion Mo/Si multilayer mirrors for EUV lithography applications**
M. Saedi, C. Sfiligoj, J. Verhoeven and J.W.M. Frenken
Appl. Surf. Sci. **507** (2020) 144951.
- 175 **On the origin of frictional energy dissipation**
R. Hu, S.Yu. Krylov and J.W.M. Frenken
Trib. Lett. **68** (2020) 8.
- 174 **In situ observations of an active MoS₂ model hydrodesulfurization catalyst**
R.V. Mom, J.N. Louwen, J.W.M. Frenken and I.M.N. Groot
Nature Commun. **10** (2019) 2546.
- 173 **The pressure gap for thiols: methanethiol self-assembly on Au(111) from vacuum to 1 bar**
R.V. Mom, S.T.A.G. Melissen, P. Sautet, J.W.M. Frenken, S.N. Steinmann and I.M.N. Groot
J. Phys. Chem. C **123** (2019) 12382.
- 172 **On the non-trivial origin of atomic-scale patterns in friction force microscopy**
D.W. van Baarle, S.Yu. Krylov, M.E.S. Beck and J.W.M. Frenken
Trib. Lett. **67** (2019) 15.

- 171 **The effect of oxidation and resulfidation on (Ni/Co) MoS₂ hydrodesulfurisation catalysts**
G.M. Bremmer, L. Van Haandel, E.J.M. Hensen, J.W.M. Frenken and P.J. Kooyman
Appl. Cat. B: Environmental **243** (2019) 145.
- 170 **Nucleation, alloying, and stability of Co-Re bimetallic nanoparticles on Al₂O₃/NiAl(110)**
R.V. Mom, O. Ivashenko, J.W.M. Frenken, I.M.N. Groot and A.O. Sjøstad
J. Phys. Chem. C **122** (2018) 8967.
- 169 **Formation of a monolayer h-BN nanomesh on Rh (111) studied using in-situ STM**
G.C. Dong, Y. Zhang, and J.W.M. Frenken
Science China – Phys. Mech. & Astron. **61** (2018) 076811.
- 168 **Structural dynamics of Al₂O₃/NiAl(110) during film growth in NO₂**
R.V. Mom, J. Vermeer, J.W.M. Frenken and I.M.N. Groot
J. Phys. Chem. B **122** (2018) 788.
- 167 **In situ TEM observation of multilayer graphene formation from CO on cobalt nanoparticles at atmospheric pressure**
G.M. Bremmer, E. Zacharaki, A.O. Sjøstad, V. Navarro, J.W.M. Frenken and P.J. Kooyman
Microsc. Microanal. **23** (2017) 896.
- 166 **Simultaneous scanning tunneling microscopy and synchrotron X-ray measurements in a gas environment**
R.V. Mom, W.G. Onderwaater, M.J. Rost, M. Jankowski, S. Wenzel, L. Jacobse, P.F.A. Alkemade, V. Vandalon, M.A. van Spronsen, M. Van Weeren, B. Crama, P. van der Tuijn, R. Felici, W.M.M. Kessels, F. Carla, J.W.M. Frenken and I.M.N. Groot
Ultramicrosc. **182** (2017) 233.
- 165 **Observing the oxidation of platinum**
M.A. van Spronsen, J.W.M. Frenken and I.M.N. Groot
Nature Commun. **8** (2017) 429.
- 164 **Surface science under reaction conditions: CO oxidation on Pt and Pd model catalysts**
M.A. van Spronsen, J.W.M. Frenken and I.M.N. Groot
Chem. Soc. Rev. **46** (2017) 4347.
- 163 **In situ optical reflectance difference observations of CO oxidation over Pd(100)**
W.G. Onderwaater, A. Taranovskyy, G.C. van Baarle, J.W.M. Frenken and I.M.N. Groot
J. Phys. Chem. C **121** (2017) 11407.
- 162 **Energy dissipation accompanying atomic-scale friction: nonlocality and memory**
S.Yu. Krylov and J.W.M. Frenken
Colloid. Journ. **79** (2017) 341.
- 161 **In situ TEM observation of the Boudouard reaction: multi-layered graphene formation from CO on cobalt nanoparticles at atmospheric pressure**
G.M. Bremmer, E. Zacharaki, A.O. Sjøstad, V. Navarro, J.W.M. Frenken and P.J. Kooyman
Farad. Discuss. **197** (2017) 337.
- 160 **In situ studies of NO reduction by H₂ over Pt using surface X-ray diffraction and transmission electron microscopy**
S.B. Roobol, W.G. Onderwaater, M.A. van Spronsen, F. Carla, O. Balmes, V. Navarro, S. Vendelbo, P.J. Kooyman, C.F. Elkjaer, S. Helveg, R. Felici, J.W.M. Frenken and I.M.N. Groot
Phys. Chem. Chem. Phys. **19** (2017) 8485.
- 159 **Non-local and memory character of frictional energy dissipation on atomic scale**
S.Yu. Krylov and J.W.M. Frenken
Engineering **9** (2017) 14.
- 158 **From dull to shiny: A novel setup for reflectance difference analysis under catalytic conditions**
W.G. Onderwaater, A. Taranovskyy, G.M. Bremmer, G.C. van Baarle, J.W.M. Frenken and I.M.N. Groot,
Rev. Sci. Instrum. **88** (2017) 023704.
- 157 **Oxidation of CO on Pd(1 0 0): on the structural evolution of the PdO layer during the self sustained oscillation regime**
W.G. Onderwaater, O. Balmes, S.B. Roobol, M.A. van Spronsen, J. Dmiec, F. Carla, R. Felici and J.W.M.

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Catalysis Structure & Reactivity **3** (2017) 89.
- 156 **Why do we “feel” atoms in nano-scale friction?**
S.Yu. Krylov, D.W. van Baarle, M.E.S. Beck and J.W.M. Frenken
Colloid Journ. **79** (2017) 81.
- 155 **Graphene/Rh(111) structure studied using in-situ scanning tunnelling microscopy**
G.C. Dong, D.W. van Baarle, J.W.M. Frenken and Q.W. Tang,
Chinese Phys. Lett. **33** (2016) 116101.
- 154 **Combined scanning probe microscopy and x-ray scattering instrument for in situ catalysis investigations**
W.G. Onderwaater, P.C. van der Tuijn, R.V. Mom, M.A. van Spronsen, S.B. Roobol, A. Saedi, J. Drnec, H. Isern, F. Carla, T. Dufrane, R. Koehler, B. Crama, I.M.N. Groot, R. Felici and J.W.M. Frenken
Rev. Sci. Instrum. **87** (2016) 113705.
- 153 **In situ observation of self-assembled hydrocarbon Fischer–Tropsch products on a cobalt catalyst**
V. Navarro, M.A. van Spronsen and J.W.M. Frenken
Nature Chemistry **8** (2016) 929.
- 152 **Instability of NiMoS₂ and CoMoS₂ HDS catalysts at ambient conditions: a quasi-in-situ HRTEM and XPS study**
G.M. Bremmer, L. van Haandel, E. Hensen, J.W.M. Frenken and P. Kooyman
J. Phys. Chem. C **120** (2016) 19204.
- 151 **Tuning the properties of molybdenum oxide on Al₂O₃/NiAl(110): metal versus oxide deposition**
R.V. Mom, M.J. Rost, J.W.M. Frenken and I.M.N. Groot
J. Phys. Chem. C **120** (2016) 19737.
- 150 **Shape and size of cobalt nanoislands formed spontaneously on cobalt terraces during Fischer-Tropsch synthesis**
A. Banerjee, V. Navarro, J.W.M. Frenken, A.P. van Bavel, H.P.C.E. Kuipers and M. Saeys
J. Phys. Chem. Lett. **7** (2016) 1996.
- 149 **Fabrication of high-aspect ratio silicon nanopillars for tribological experiments**
P.V. Antonov, M.R. Zuiddam and J.W.M. Frenken
J. Micro-Nanolithography MEMS and MOEMS **14** (2015) 044506.
- 148 **BINoculars: data reduction and analysis software for two-dimensional detectors in surface X-ray diffraction**
S. Roobol, W.G. Onderwaater, J. Drnec, R. Felici and J.W.M. Frenken
J. Appl. Crystal. **48** (2015) 1324.
- 147 **The ReactorAFM: Non-contact atomic force microscope operating under high-pressure and high-temperature catalytic conditions**
S.B. Roobol, M.E. Cañas-Ventura, M. Bergman, M.A. van Spronsen, W.G. Onderwaater, P.C. van der Tuijn, R. Koehler, A. Ofitserov, G.J.C. van Baarle and J.W.M. Frenken
Rev. Sci. Instrum. **86** (2015) 033706.
- 146 **The ReactorSTM: atomically resolved scanning tunneling microscopy under high-pressure, high-temperature catalytic reaction conditions**
C.T. Herbschleb, P.C. van der Tuijn, S. Roobol, V. Navarro-Paredes, J.W. Bakker, Q. Liu, D. Stoltz, M.E. Cañas-Ventura, G. Verdoes, M. van Spronsen, M. Bergman, L. Crama, I. Taminiau, A. Ofitserov, G.J. van Baarle and J.W.M. Frenken
Rev. Sci. Instrum. **85** (2014) 083703.
- 145 **Superlubric to stick-slip sliding of incommensurate graphene flakes on graphite**
M.M. van Wijk, A. Fasolino, M. Dienwiebel and J.W.M. Frenken
Phys. Rev. B **88** (2013) 235423.
- 144 **Kinetics of graphene formation on Rh(111) investigated by in-situ scanning tunneling microscopy**
G.C. Dong, D.W. van Baarle, M.J. Rost and J.W.M. Frenken
ACS Nano **7** (2013) 7028.

- 143 **The problem of critical damping in nanofriction**
S.Yu. Krylov, J.W.M. Frenken
Coll. J. **74** (2012) 569.
- 142 **Graphene formation on metal surfaces investigated by in-situ scanning tunneling microscopy**
G.C. Dong, D.W. van Baarle, M.J. Rost and J.W.M. Frenken
N. J. Phys. **14** (2012) 053033.
- 141 **The active phase of palladium during methane oxidation**
A. Hellman, A. Resta, M.N. Martin, J. Gustafson, A. Trinchero, P.A. Carlsson, O. Balmes, R. Felici, R. van Rijn, J.W.M. Frenken, J.N. Andersen, E. Lundgren and H. Gronbeck
J. Phys. Chem. Lett. **3** (2012) 678.
- 140 **Reversible formation of a PdCx phase in Pd nanoparticles upon CO and O-2 exposure**
O. Balmes, A. Resta, D. Wermeille, R. Felici, M.E. Messing, K. Deppert, Z. Liu, M.E. Grass, H. Bluhm, R. van Rijn, J.W.M. Frenken, R. Westerström, S. Blomberg, J. Gustafson, J.N. Andersen and E. Lundgren
Phys. Chem. Chem. Phys. **14** (2012) 4796.
- 139 **A general model of metal underpotential deposition in the presence of thiol-based additives based on an in situ STM study**
Y. Yanson, J.W.M. Frenken and M.J. Rost
Phys. Chem. Chem. Phys. **13** (2011) 16095.
- 138 **Surface structure and reactivity of Pd(100) during CO oxidation near ambient pressures**
R. van Rijn, O. Balmes, A. Resta, D. Wermeille, R. Westerström, J. Gustafson, R. Felici, E. Lundgren and J.W.M. Frenken
Phys. Chem. Chem. Phys. **13** (2011) 13167. (article featured on the cover of PCCP)
- 137 **A new role for steps in catalysis**
B.L.M. Hendriksen, M.D. Ackermann, S.C. Bobaru, I. Popa, S. Ferrer and J.W.M. Frenken
Nature Chemistry **2** (2010) 730.
- 136 **Reply to “Comment on ‘Catalytic activity of the Rh surface oxide: CO oxidation over Rh(111) under realistic conditions’”**
J. Gustafson, R. Westerström, O. Balmes, A. Resta, R. van Rijn, X. Torrelles, C.T. Herbschleb, J.W.M. Frenken and E. Lundgren
J. Phys. Chem. C **114** (2010) 22372.
- 135 **Response to “Comment on ‘MEMS-based high speed scanning probe microscopy’”**
E.C.M. Disseldorp, F.C. Tabak, A.J. Katan, M.B.S. Hesselberth, T.H. Oosterkamp, J.W.M. Frenken and W.M. van Spengen
Rev. Sci. Instrum. **81** (2010) 117102.
- 134 **The description of friction of silicon MEMS with surface roughness: virtues and limitations of a stochastic Prandtl-Tomlinson model and the simulation of vibration-induced friction reduction**
W.M. van Spengen, V. Turq and J.W.M. Frenken
Beilstein J. Nanotechnol. **1** (2010) 163.
- 133 **Microscale friction reduction by normal force modulation in MEMS**
W.M. van Spengen, G.H.C.J. Wijts, V. Turq and J.W.M. Frenken
J. Adh. Sci. Technol. **24** (2010) 2669.
- 132 **Reply to “Comment on ‘Catalytic activity of the Rh surface oxide: CO oxidation over Rh(111) under realistic conditions’”**
J. Gustafson, R. Westerström, O. Balmes, A. Resta, R. van Rijn, X. Torrelles, C.T. Herbschleb, J.W.M. Frenken and E. Lundgren
J. Phys. Chem. C **114** (2010) 22372.
- 131 **Comment on “CO oxidation on Pt group metals from ultrahigh vacuum to near atmospheric pressures. 2. Palladium and Platinum”**
R. van Rijn, O. Balmes, R. Felici, J. Gustafson, D. Wermeille, R. Westerström, E. Lundgren and J.W.M. Frenken
J. Phys. Chem. C **114** (2010) 6875.
- 130 **MEMS-based fast scanning probe microscopes**
F.C. Tabak, E.C.M. Disseldorp, G.H. Wortel, A.J. Katan, M.B.S. Hesselberth, T.H. Oosterkamp, J.W.M.

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Ultramicroscopy **10** (2010) 599.
- 129 **MEMS-based high speed scanning probe microscopy**
E.C.M. Disseldorp, F.C. Tabak, A.J. Katan, M.B.S. Hesselberth, T.H. Oosterkamp, J.W.M. Frenken and W.M. van Spengen
Rev. Sci. Instrum. **81** (2010) 043702.
- 128 **High-pressure STM study of NO reduction by CO on Pt(100)**
C.T. Herbschleb, S.C. Bobaru and J.W.M. Frenken
Catalysis Today **154** (2010) 61 (invited paper).
- 127 **How boron nitride forms a regular nanomesh on Rh(111)**
G. Dong, E.B. Fourré, F.C. Tabak and J.W.M. Frenken
Phys. Rev. Lett. **104** (2010) 096102.
- 126 **Catalytic activity of the Rh surface oxide: CO oxidation over Rh(111) under realistic conditions**
J. Gustafson, R. Westerström, O. Balmes, A. Resta, R. van Rijn, X. Torrelles, C. T. Herbschleb, J.W. M. Frenken and E. Lundgren
J. Phys. Chem. C **114** (2010) 4580.
- 125 **Ultrahigh vacuum/high-pressure flow reactor for surface x-ray diffraction and grazing incidence small angle x-ray scattering studies close to conditions for industrial catalysis**
R. van Rijn, M.D. Ackermann, O. Balmes, T. Dufrane, A. Geluk, H. Gonzalez, H. Isern, E. de Kuyper, L. Petit, V.A. Sole, D. Wermeille, R. Felici and J.W.M. Frenken
Rev. Sci. Instrum. **81** (2010) 014101.
- 124 **Atomic-scale friction experiments reconsidered in the light of rapid contact dynamics**
S.Yu. Krylov and J.W.M. Frenken
Phys. Rev. B **80** (2009) 235435.
- 123 **Thermolubricity in atomic-scale friction**
K.B. Jinesh, S.Yu. Krylov, H. Valk, M. Dienwiebel and J.W.M. Frenken
Phys. Rev. B **78** (2008) 155440.
- 122 **The crucial role of temperature in atomic scale friction**
S.Yu. Krylov and J.W.M. Frenken
J. Phys. Cond. Mat. **20** (2008) 354003
- 121 **Experimental evidence for ice formation at room temperature**
K.B. Jinesh and J.W.M. Frenken
Phys. Rev. Lett. **101** (2008) 036101.
- 120 **Structure and reactivity of a model catalyst alloy under realistic conditions**
R. Westerström, J.G. Wang, M.D. Ackermann, J. Gustafson, A. Resta, A. Mikkelsen, J.N. Andersen, E. Lundgren, O. Balmes, X. Torrelles, J.W.M. Frenken and B. Hammer
J. Phys. Cond. Mat. **20** (2008) 184018.
- 119 **Torque and twist against superlubricity**
A.E. Filippov, M. Dienwiebel, J.W.M. Frenken, J. Klafter and M. Urbakh
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