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Imaging complex model catalysts in action: From surface science towards industrial practice using high-pressure scanning tunneling microscopy

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List of publications

Peer-reviewed publications

1. A. I. Yanson, P. Rodriguez, N. Garcia-Araez, R.V. Mom, F.D. Tichelaar, M.T.M. Koper
Cathodic Corrosion: A Quick, Clean, and Versatile Method for the Synthesis of Metallic Nanoparticles
Angew. Chem. Int. Ed., **2011**, 50, 6346–6350
2. R.V. Mom, C. Hahn, L. Jacobse, L.B.F. Juurlink
LEED Analysis of Nickel Cylindrical Single Crystal
Surface Science, **2013**, 613, 15-20
3. R.V. Mom, J. Cheng, M.T.M. Koper, M. Sprik
Modeling the Oxygen Evolution Reaction on Metal Oxides: The Influence of Unrestricted DFT Calculations
J. Phys. Chem. C, **2014**, 118, 4095-4102
4. R.V. Mom, M.J. Rost, J.W.M. Frenken, I.M.N. Groot
Tuning the Properties of Molybdenum Oxide on Al₂O₃/NiAl(110): Metal Versus Oxide Deposition
J. Phys. Chem. C, **2016**, 120, 19737–19743
5. 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. Carlà, T. Dufrane, R. Koehler, B. Crama, I.M.N. Groot, R. Felici, J.W.M. Frenken
Combined scanning probe microscopy and X-ray scattering instrument for in situ catalysis investigations
Rev. Sci. Instr., **2016**, 87, 113705
6. 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. Carlà, J.W.M. Frenken, I.M.N. Groot
Simultaneous scanning tunneling microscopy and synchrotron X-ray measurements in a gas environment
Submitted
7. R.V. Mom, S. Wenzel, M.K. Prabhu, J.W.M. Frenken, I.M.N. Groot
The growth and stability of Au surface oxides on WO₃/Au(111) and ReO₃/Au(111) inverse model catalysts
Submitted

8. R.V. Mom, J. Louwen, J.W.M. Frenken, I.M.N Groot
In situ observations of an active MoS₂ model hydrodesulfurization catalyst
Submitted
9. R.V. Mom, O. Ivashenko, J.W.M. Frenken, I.M.N. Groot, A.O. Sjøstad
The nucleation and thermal stability of Re and Co-Re nanoparticles on Al₂O₃/NiAl(110)
In preparation
10. R.V. Mom, S.N. Steinmann, S.T. Melissen, J.W.M. Frenken, P. Sautet, I.M.N. Groot
The adsorption of CH₃SH on Au(111) from vacuum to 1 bar
In preparation
11. R.V. Mom, J. Vermeer, J.W.M. Frenken, I.M.N Groot
Crystalline Al₂O₃ on NiAl(110) beyond two-layer thickness
In preparation

Other publications

R.V. Mom

Oppervlaktewetenschap onder druk (Surface science under pressure)

Review article on high-pressure surface science in the NEVAC-Blad, the journal of the Netherlands Vacuum Society.