

## List of Publications Dr. Shamil SHAIKHUTDINOV

220. Prieto M, Mullan T, Wan W, Tanase L, Souza Calda L, Shaikhutdinov S, Sauer J, Usvyat D, Schmidt T, Roldan Cuenya B  
[Plasma functionalization of silica bilayer polymorphs](#)  
ACS Applied Materials & Interfaces, accepted
219. Wan W, Geiger J, Berdunov N, Lopez Luna M, Chee SW, Daelman, Lopez N, Shaikhutdinov S, Roldan Cuenya B  
[Highly stable and reactive platinum single atoms on oxygen plasma – functionalized CeO<sub>2</sub> surfaces: Nanostructuring and peroxo effects](#)  
Angew Chem Int Ed, 61 (2022) e202112640
218. Richter N, Ronnenburg H, Clawin P, Subat N, Feiten F, Pal J, Emmez E, Shaikhutdinov S, Kuhlenbeck H, Risse T, Freund HJ  
[Electron-stimulated hydroxylation of silica bilayer films grown on Ru\(0001\): A combined HREELS and EPR study](#)  
J Phys Chem C, 126 (2022) 7956 – 7964
217. Lopez Luna M, Timoshenko J, Kordus D, Rettenmaier C, Chee SW, Hoffman A, Bare S, Shaikhutdinov S, Roldan Cuenya B  
[Role of the oxide support on the structural and chemical evolution of Fe catalysts during the hydrogenation of CO<sub>2</sub>](#)  
ACS Catalysis, 11 (2021) 6175 - 6185
216. Siefert J, Carey S, Schauer mann S, Shaikhutdinov S, Freund HJ  
[Water and carbon dioxide adsorption on CaO\(001\) studied via single crystal adsorption calorimetry](#)  
Topics in Catalysis, 64 (2021) 1030-1040
215. Zhong JQ, Shaikhutdinov S, Roldan Cuenya B  
[Structural Evolution of Ga-Cu Model Catalysts for CO<sub>2</sub> Hydrogenation Reactions](#)  
J Phys Chem C, 125 (2021) 1361–1367
214. Zhang K, Li L, Goniakowski J, Noguera C, Freund HJ, Shaikhutdinov S  
[Size effect in two-dimensional oxide-on-metal catalysts of CO oxidation and its connection to oxygen bonding: An experimental and theoretical approach](#)  
J Catal, 393 (2021) 100–106
213. Li Z, Werner K, Lu C, ..., Shaikhutdinov S, Huang W, Freund HJ  
[Interaction of Hydrogen with Ceria: Hydroxylation, Reduction, and Hydride Formation on the Surface and in the Bulk](#)  
Chemistry – A European Journal, 27 (2021) 1-10
212. Freund HJ, Heyde M, Kuhlenbeck, Nilius N, Risse T, Schmidt T, Shaikhutdinov S, Sterrer M

[Model Systems in Heterogeneous Catalysis at the Atomic Level: A Personal View](#)

Science China Chemistry, 63 (2020) 426–447

211. Zhong JQ, Han ZK, Werner K, Li XY, Gao Y, Shaikhutdinov S, Freund HJ  
[Water –Assisted Homolytic Dissociation of Propyne on Reduced Ceria](#)  
Angew Chem Int Ed, 59 (2020) 6150
210. Li Z, Werner K, Qian K, You R, Plucienik A, Jia A, Wu L, Zhang L, Pan H, Kühlenbeck, Shaikhutdinov S, Huang W, Freund HJ  
[Oxidation of reduced ceria by incorporation of hydrogen](#)  
Angew Chem Int Ed, 58 (2019) 2-10
209. Sorek E, Ankri J, Arbiv G, Mol R, Popov I, Freund HJ, Shaikhutdinov S, Asscher M  
[Acetylene Reactivity on Pd-Cu Nanoparticles Supported on Thin Silica Films: The Role of the Underlying Substrate](#)  
J Phys Chem C 123 (2019) 17425-17431
208. Bondarchuk O, Shaikhutdinov S, Freund HJ  
[Interaction of gold with oxide nanoparticles: Size or electronic effects?](#)  
J Phys Chem C, 123 (2019) 12376
207. Zaki E, Jakub Z, Mirabella F, Parkinson G, Shaikhutdinov S, Freund HJ  
[Water ordering on the magnetite Fe<sub>3</sub>O<sub>4</sub> surfaces](#)  
J Phys Chem Lett, 10 (2019) 2487-2492
206. Richter N, Feiten F, Pal J, Plucienik A, Emmez E, Shaikhutdinov S, Kühlenbeck H, Risse T, Freund HJ, Goikoetxea I, Włodarczyk R, Sauer J  
[Characterization of Phonon Vibrations of Silica Bilayer Films](#)  
J Phys Chem C, 123 (2019) 7110-17117
205. Prieto M, Schmidt T, Shaikhutdinov S, Freund HJ  
[Chemische Reaktionen in eingegrenzten Räumen](#)  
MPG Jahrbuch 2018
204. Weng X, Cui Y, Shaikhutdinov S, Freund HJ  
[CO<sub>2</sub> adsorption on CaO\(001\): TPD and IR study](#)  
J Phys Chem C, 123 (2019) 1880-1887
203. Sterrer M, Nilius N, Shaikhutdinov S, Heyde M, Schmidt T, Freund HJ  
[Interaction of water with oxide thin film model systems](#)  
J Mater Res, 34 (2019) 360-378
202. Fidelis I, Stiehler C, Duarte M., Enderlein C, Silva WS, Soares EA, Shaikhutdinov S, Freund HJ, Stavale F.  
[Electronic properties of ultrathin O-terminated ZnO\(000-1\) films on Au\(111\)](#)  
Surface Science 679 (2019) 259-263
201. Mirabella F, Zaki E, Ivars-Barcelo F, Schauerermann S, Shaikhutdinov S, Freund HJ  
[CO<sub>2</sub> adsorption on magnetite Fe<sub>3</sub>O<sub>4</sub>\(111\)](#)  
J Phys Chem C, 122 (2018) 27433-27441

200. Panhwar G, Mysyk R, Rojo T, Shaikhutdinov S, Bondarchuk O  
[Electrowetting of ionic liquid on graphite: In situ electrochemical X-ray photoelectron spectroscopy probing](#)  
Langmuir, 34 (2018) 14528-14536
199. Shaikhutdinov S  
[Strong Metal-Support Interaction and Reactivity of Ultrathin Oxide Films](#)  
Catalysis Lett 148 (2018), 2627-2635
198. Zaki E, Mirabella F, Ivars-Barcelo F, Seifert J, Carey S, Li X, Shaikhutdinov S, Freund HJ, Li X, Paier J, Sauer J,  
[Water adsorption the on Fe<sub>3</sub>O<sub>4</sub>\(111\) Surface: Dissociation and network formation](#)  
Phys Chem Chem Phys 20 (2018) 15764 - 15774
197. D. Kuhness, H.J. Yang, H.W. Klemm, M. Prieto, G. Peschel, A. Fuhrich, D. Menzel, T. Schmidt, X. Yu, S. Shaikhutdinov, A. Lewandowski, M. Heyde, A. Kelemen, R. Włodarczyk, D. Usvyat, M. Schütz, J. Sauer, H.-J. Freund  
[A Two-Dimensional 'Zigzag' Silica Polymorph on a Metal Support](#)  
J Am Chem Soc, 140 (2018) 6164-6168
196. Pan Q, Li L, Shaikhutdinov S, Fujimori Y, Hollerer M, Sterrer M, Freund HJ  
[Model Systems in Heterogeneous Catalysis: Towards designing and understanding of structure and electronic properties](#)  
Faraday Discussions, 208 (2018) 307-323
195. Moeller C, Barreto J, Stavale F, Tissot H, Shaikhutdinov S, Freund HJ, Nilus N  
[Water Adsorption to Crystalline Cu<sub>2</sub>O Thin Films – Structural and Vibrational Properties](#)  
J Phys Chem C, 122 (2018) 2195-2199
194. Tissot H, Weng X, Schlexer P, Pacchioni G, Shaikhutdinov S, Freund HJ  
[Ultrathin silica films on Pd\(111\): Structure and adsorption properties](#)  
Surf Sci, 678 (2018) 118-123
193. Zhang K, Li L, Shaikhutdinov S, Freund HJ  
[Carbon Monoxide Oxidation on Metal-Supported Monolayer Oxide Films: Establishing Which Interface is Active.](#)  
Angew. Chem. Int. Ed. 57 (2017) 1261-1265
192. Mirabella F, Zaki E, Ivars-Barcelo F, Li X, Paier J, Sauer J, Shaikhutdinov S, Freund HJ  
[Cooperative Formation of Long-Range Ordering in Water Ad-layers on Fe<sub>3</sub>O<sub>4</sub>\(111\) Surfaces](#)  
Angew. Chem. Int. Ed. 57 (2017) 1409-1413
191. Pan Q, Li L, Shaikhutdinov S, Freund HJ  
[Planar model system of the Phillips \(Cr/SiO<sub>2</sub>\) catalyst based on a well-defined thin silicate film](#)  
J. Catal. 357 (2018) 12-19

190. Werner K, Weng X, Calaza F, Sterrer M, Kropp Th, Paier J, Sauer J, Wilde M, Fukutani K, Shaikhutdinov S, Freund HJ  
[Toward an Understanding of Selective Alkyne Hydrogenation on Ceria: On the Impact of O Vacancies on H<sub>2</sub> Interaction with CeO<sub>2</sub>\(111\)](#)  
J. Am. Chem. Soc. 139 (2017) 17608–17616
189. Yao B, Mandrà S, Curry J, Shaikhutdinov S, Freund H-J, Schrier J  
[Gas Separation Through Bilayer Silica, The Thinnest Possible Silica Membrane](#)  
ACS Applied Materials & Interfaces, 9 (2017) 43061–43071
188. Solis BH, Sauer J, Cui Y, Shaikhutdinov S, Freund HJ  
[Oxygen scrambling of CO<sub>2</sub> adsorbed on CaO\(001\)](#)  
J Phys Chem C, 121 (2017) 18625–18634
187. Li X, Paier J, Sauer J, Mirabella F, Zaki E, Ivars-Barcelo F, Shaikhutdinov S, Freund HJ  
[Surface Termination of Fe<sub>3</sub>O<sub>4</sub>\(111\) Films Studied by CO Adsorption Revisited](#)  
J Phys Chem B, 122 (2018) 527-533
186. Liu BH, Groot IRM, Pan Q, Shaikhutdinov S, Freund HJ  
[Ultrathin Zn and ZnO films on Cu\(111\) as model catalysts](#)  
Appl. Catal. A 548 (2017) 16-23.
185. Li L, Tissot H, Shaikhutdinov S, Freund HJ  
[Transition metal induced crystallization of ultrathin silica films](#)  
Chem Mater, 29 (2017) 931-934
184. Solis BH, Cui Y, Weng X, Seifert J, Schauermaun S, Sauer J, Shaikhutdinov S, Freund HJ  
[Initial stages of CO<sub>2</sub> adsorption on CaO: A combined experimental and computational study](#)  
PhysChemChemPhys, 19 (2017) 4231-4242
183. Freund HJ, Heyde M, Kühlenbeck H, Nilius N, Risse T, Schauermaun S, Schmidt T, Shaikhutdinov S, Sterrer M  
[Thin oxide films as model systems for heterogeneous catalysts](#)  
in Springer Handbook Surface Science
182. Weng X, Zhang K, Pan Q, Martynova Y, Shaikhutdinov S, Freund HJ  
[Support effects on CO oxidation on metal-supported ultrathin FeO\(111\) films](#)  
ChemCatChem, 9(2017) 705-712
181. Shaikhutdinov S  
[Surface structures of gold and gold-based bimetallic nanoparticles](#)  
in "Gold nanoparticles for physics, biology and chemistry" 2-nd Edition, Eds. C. Louis, O. Pluchery, World Scientific, ISBN 1786341247
180. Lewandowski M, Groot IMN, Qin ZH, Ossowski T, Pabisiak T, Kiejna A, Pavlovska A, Shaikhutdinov S, Freund HJ, Bauer E  
[Nanoscale Patterns on Polar Oxide Surfaces](#)  
Chem Mater 28 (2016) 7433
179. Tissot H, Li L, Shaikhutdinov S, Freund HJ

- Preparation and structure of Fe-containing aluminosilicate thin films  
Phys Chem Chem Phys 18 (2016) 25027
178. Kumagai T, Liu S, Shiotari A, Baugh D, Shaikhutdinov S, Wolf M  
[Local electronic structure, work function, and line defect dynamics of ultrathin epitaxial ZnO layers on a Ag\(111\) surface](#)  
J Phys. Condens. Matter 28 (2016) 1120
177. O'Brien CP, Dostert KH, Hollerer M, Stiehler C, Calaza F, Schauer mann S, Shaikhutdinov S, Sterrer M, Freund HJ  
[Supports and modified nanoparticles in designing model catalysts](#)  
Faraday Discussions 188 (2016) 309
176. Yu X, Emmez E, Pan Q, Pomp S, Kaden WE, Sterrer M, Shaikhutdinov S, Freund HJ, Goikoetxea I, Wlodarczyk R, Sauer J  
[Electron stimulated hydroxylation of a metal supported silicate film](#)  
Phys Chem Chem Phys 18 (2016) 3755
175. Emmez E, Boscoboinik JA, Tenney S, Sutter P, Shaikhutdinov S, Freund HJ  
[Oxidation of the Ru\(0001\) surface covered by weakly bound, ultrathin silicate films](#)  
Surface Science 646 (2016) 19
174. Shaikhutdinov S, Freund HJ  
[Ultra-thin silicate films on metals](#)  
J Phys Condens. Matter 27 (2015) 443001
173. Fischer FD, Sauer J, Yu X, Boscoboinik JA, Shaikhutdinov S, Freund HJ  
[Ultrathin Ti-silicate film on a Ru\(0001\) surface](#)  
J Chem Phys C 119 (2015) 15443
172. Pan Q, Weng X, Chem MS, Giordano L, Pacchioni G, Noguera C, Goniakowski J, Shaikhutdinov S, Freund HJ  
[Enhanced CO oxidation on oxide/metal interface: From ultra-high vacuum to near-atmospheric pressures](#)  
ChemCatChem 7(2015) 2620
171. Zhang K, Shaikhutdinov S, Freund HJ  
[Does Surface Structure of Oxide Affect Strong Metal-Support Interaction with Pt? Pt on Fe<sub>3</sub>O<sub>4</sub>\(001\) vs Fe<sub>3</sub>O<sub>4</sub>\(111\)](#)  
ChemCatChem 7(2015) 3725
170. Davis EM, Zhang K, Cui Y, Kuhlenbeck H, Shaikhutdinov S, Freund HJ  
[Growth of Fe<sub>3</sub>O<sub>4</sub>\(100\) thin films on Pt\(100\): Tuning surface termination with an Fe buffer layer](#)  
Surface Science, 636 (2015) 42
169. Liu BH, Boscoboinik JA, Cui Y, Shaikhutdinov S, Freund HJ  
[Stabilization of ultrathin zinc oxide films on metals: Reconstruction versus hydroxylation](#)  
J Phys. Chem. C 119 (2015) 7842
168. Liu BH, McBriarty ME, Bedzyk M, Shaikhutdinov S, Freund HJ

- [Structural transformations of zinc oxide layers on Pt\(111\)](#)  
J Phys. Chem. C 118 (2014) 28725
167. Boscoboinik JA, Shaikhutdinov S  
[Exploring zeolite chemistry with the tools of surface science: Challenges, opportunities, and limitations](#)  
Catal. Lett. 144 (2014) 1987-1995
166. Shiotari A, Liu BH, Jaekel S, Grill L, Shaikhutdinov S, Freund HJ, Wolf M, Kumagai T  
[Local characterization of ultrathin ZnO layers on Ag\(111\) by scanning tunneling microscopy and atomic force microscopy](#)  
J Phys. Chem. C 118 (2014) 27428 -27435
165. Freund HJ, Shaikhutdinov S, Nilius N  
[Model studies on heterogeneous catalysts at the atomic scale](#)  
Top. Catal. 57 (2014) 822 – 832
164. Yang B, Shaikhutdinov S, Freund HJ  
[Ultrathin silicatene/silicon-carbide hybrid film on a metal substrate](#)  
Surface Science 632 (2014) 9-13
163. Yang B, Shaikhutdinov S, Freund HJ  
[Tuning spatial distribution of surface hydroxyls on a metal-supported single layer silica](#)  
J Phys Chem Lett 5 (2014) 1701-1704
162. Emmez E, Yang B, Shaikhutdinov S, Freund HJ  
[Permeation of a single layer SiO<sub>2</sub> membrane and chemistry in confined space](#)  
J Phys Chem C 118 (2014) 29034
161. Büchner C, Lichtenstein L, Yu X, Boscoboinik A, Yang B, Kaden W, Heyde M, Shaikhutdinov S, Wlodarczyk R, Sierka M, Sauer J, Freund HJ  
[Ultrathin silica films: The atomic structure of two-dimensional crystals and glasses](#)  
Chemistry: Eur. J. 20 (2014) 9176 – 9183
160. Willinger M, Zhang W, Bondarchuk O, Shaikhutdinov S, Freund HJ, Schlögl R  
[Combining Advanced Microscopies and Model Systems to Elucidate the Atomic Structure of Interfaces: A Case of Strong Metal/Support Interaction](#)  
Angew. Chem. Intern. Ed. 53 (2014) 5998-6001
159. Uhlrich JJ, Yang B, Shaikhutdinov S  
[Methanol reactivity on silica-supported ceria nanoparticles](#)  
Topics Catal, 57 (2014) 1229 – 1235
158. Pan Q, Liu BH, McBriarty M, Martynova Y, Groot IMN, Wang S, Bedzyk M, Shaikhutdinov S, Freund HJ  
[Reactivity of ultrathin ZnO films supported by Ag\(111\) and Cu\(111\): A comparison to ZnO/Pt\(111\)](#)  
Catal. Lett. 144 (2014) 648-655
157. Nilius N, Risse T, Shaikhutdinov S, Sterrer M, Freund HJ

- [Model catalysts based on Au clusters and nanoparticles](#)  
Structure and Bonding, Ed. Mingos M., Springer, 162 (2014) 91-138
156. Boscoboinik JA, Yu X, Shaikhutdinov S, Freund HJ  
[Preparation of an ordered ultrathin aluminosilicate framework composed of hexagonal prisms forming a percolated network](#)  
MICROPOR MESOPOR MATER 189 (2014) 91-96
155. Martynova Y, Soldemo M, Weissenrieder J, Sachert S, Polzin S, Widdra W, Shaikhutdinov S, Freund HJ  
[CO oxidation over monolayer manganese oxide films on Pt\(111\)](#)  
Catal. Lett., 143 (2013) 1108
154. Wlodarczyk R, Sauer J, Yu X, Boscoboinik JA, Yang B, Shaikhutdinov S, Freund HJ  
[Atomic structure of an ultrathin Fe-silicate film grown on a metal: A monolayer of clay?](#)  
J Am. Chem. Soc. 135 (2013) 1922
153. Yang B, Boscoboinik JA, Yu X, Shaikhutdinov S, Freund HJ  
[Patterned defect structures predicted for graphene are observed on single-layer silica films](#)  
Nano Letters 13 (2013) 4422
152. Boscoboinik JA, Yu X, Emmez E, Yang B, Fischer F, Wlodarczyk R, Shaikhutdinov S, Sauer J, Freund HJ  
[Interaction of probe molecules with bridging hydroxyls of two-dimensional zeolites: a surface science approach](#)  
J PHYS CHEM C 117 (2013) 13547
151. Freund HJ, Heyde M, Nilius N, Schauer mann S, Shaikhutdinov S, Sterrer M  
[Model Studies on Heterogeneous Catalysts at the Atomic Scale: From Supported Metal Particles to Two-dimensional Zeolites](#)  
J CATAL, 308 (2013) 154
150. Martynova Y, Shaikhutdinov S, Freund HJ  
[CO oxidation on metal-supported ultrathin oxide films: What makes them active?](#)  
CHEMCATCHEM, 5 (2013) 2162
149. Yang B, Emmez E, Kaden W, Yu X, Boscoboinik JA, Sterrer M, Shaikhutdinov S, Freund HJ  
[Hydroxylation of Metal Supported Sheet-Like Silica Films](#)  
J PHYS CHEM C 117 (2013) 8336
148. Martynova Y, Liu BH, McBriarty ME, Groot IMN, Bedzyk M, Shaikhutdinov S, Freund HJ  
[CO oxidation over ZnO films on Pt\(111\) at near-atmospheric pressures](#)  
J CATAL 301 (2013) 227
147. Schauer mann S, Nilius N, Shaikhutdinov S, Freund HJ  
[Nanoparticles for Heterogeneous Catalysis: New Mechanistic Insights](#)  
ACC CHEM RES, 46(2013) 1673

146. Nilius N, Sterrer M, Shaikhutdinov S, Menzel D, Freund HJ  
[Model systems in catalysis for energy economy](#)  
in "Chemical Energy Storage", Ed. R. Schlögl, de Gruyter Verlag, 2012
145. Shaikhutdinov S, Freund HJ  
[Ultra-thin silica films on metals: The long and winding road to understanding the atomic structure](#)  
ADVANCED MATERIALS, 25 (2013) 49
144. Shaikhutdinov S, Freund HJ  
[Metal supported aluminosilicate ultra-thin films as a versatile tool for studying surface chemistry of zeolites](#)  
CHEMPHYSCHEM, 14 (2012) 71
143. Kühlenbeck H, Shaikhutdinov S, Freund HJ  
[Well-ordered transition metal oxide layers in model catalysis- a series of case studies](#)  
CHEM REVIEWS, 113 (2013) 3986
142. Shaikhutdinov S  
[Surface structures of gold nanoparticles](#)  
"Gold nanoparticles for physics, biology and chemistry" Eds. C. Louis, O. Pluchery, Imperial College Press, 2012 pp. 199-232
141. Martynova Y, Yang B, Yu X, Boscoboinik JA, Shaikhutdinov S, Freund HJ  
[Low temperature CO oxidation on ruthenium oxide thin films at near-atmospheric pressures](#)  
CATAL LETT 142 (2012) 657
140. Heyde M, Shaikhutdinov S, Freund HJ  
[Two-dimensional silica: Crystalline and vitreous.](#)  
CHEM PHYS LETT 550 (2012) 1
139. Beck B, Harth M, Hamilton NG, Carrero C, Uhlrich JJ, Trunschke A, Shaikhutdinov S, Schubert H, Freund HJ, Schlögl R, Sauer J, Schomäcker R  
[Partial oxidation of ethanol on vanadia catalysts on supporting oxides with different redox properties compared to propane.](#)  
J CATAL 296 (2012) 120
138. Boscoboinik JA, Yu X, Yang B, Shaikhutdinov S, Freund HJ  
[Building blocks of zeolites on an aluminosilicate ultra-thin film.](#)  
MICROPOR MESOPOR MATER 165 (2012) 158
137. Bowker M, Hutchings G, Davies PR, Edwards D, Davies R, Shaikhutdinov S, Freund HJ  
[Surface structure of  \$\gamma\$ -Fe<sub>2</sub>O<sub>3</sub>\(111\)](#)  
SURFACE SCIENCE 606 (2012) 1594
136. Boscoboinik JA, Yu X, Yang B, Fischer D, Włodarczyk R, Sierka M, Shaikhutdinov S, Sauer J, Freund HJ  
[Modeling zeolites with metal-supported two-dimensional aluminosilicate films.](#)  
ANGEWANDTE CHEMIE INT. ED. 51 (2012) 6005

135. Yu X, Yang B, Boscoboinik JA, Shaikhutdinov S, Freund HJ  
[Support effects on the atomic structure of ultra-thin silica films on metals](#)  
APPL PHYS LETT 100 (2012) 151608
134. Yang B, Kaden WE, Yu X, Boscoboinik JA, Martynova Y, Lichtenstein L, Heyde M, Sterrer M, Wlodarczyk R, Sierka M, Sauer J, Shaikhutdinov S, Freund HJ  
[Thin silica films on Ru\(0001\): monolayer, bilayer and three-dimensional networks of \[SiO<sub>4</sub>\] tetrahedra](#)  
PHYS CHEM CHEM PHYS 14 (2012) 11344
133. Kozlov S, Vines F, Nilius N, Shaikhutdinov S, Neyman K  
[Absolute surface step energy: Accurate theoretical methods applied to ceria nanoislands](#)  
J CHEM PHYS LETT 3 (2012) 1956
132. Nilius N, Kozlov S, Jerratsch JF, Baron M, Shao X, Vines F, Shaikhutdinov S, Neyman K, Freund HJ  
[Formation of one-dimensional electronic states along the step edges of CeO<sub>2</sub>\(111\)](#)  
ACS NANO 6 (2012) 1126
131. Wlodarczyk R, Sierka M, Sauer J, Löffler D, Uhlrich JJ, Yu X, Yang B, Groot IMN, Shaikhutdinov S, Freund HJ  
[Tuning the electronic structure of ultrathin crystalline silica films on Ru\(0001\)](#)  
PHYSICAL REVIEW B 85 (2012) 085403
130. Sala A, Marchetto H, Qin Z-H, Shaikhutdinov S, Schmidt T, Freund HJ  
[Defects and inhomogeneities in Fe<sub>3</sub>O<sub>4</sub> thin film grown on Pt\(111\)](#)  
PHYSICAL REVIEW B 86 (2012) 155430
129. Shaikhutdinov S, Freund HJ  
[Ultrathin oxide films on metal supports: Structure-reactivity relations](#)  
ANNUAL REVIEW OF PHYSICAL CHEMISTRY, 63 (2012) 619
128. Lichtenstein L, Büchner C, Yang B, Shaikhutdinov S, Heyde M, Sierka M, Wlodarczyk R, Sauer J, Freund HJ  
[The atomic structure of a metal supported vitreous thin silica film](#)  
ANGEWANDTE CHEMIE INT. ED. 51 (2012) 404
127. Lewandowski M, Groot IMN, Shaikhutdinov S, Freund HJ  
[Scanning tunneling evidence for the Mars-van Krevelen type mechanism of low temperature CO oxidation on an FeO\(111\) film on Pt\(111\).](#)  
CATALYSIS TODAY 181 (2012) 52
126. McInroy A. R., Uhl A., Lear T., ... Shaikhutdinov S, Freund HJ...  
[Morphological and chemical influences on alumina-supported Pd catalysts active for the gas phase hydrogenation of crotonaldehyde.](#)  
JOURNAL OF CHEMICAL PHYSICS 134 (2011) 214704
125. Uhlrich JJ, Sainio J, Lei Y, Edwards D, Davis R, Bowker M, Shaikhutdinov S, Freund HJ  
[Preparation and characterization of iron-molybdate thin films](#)

SURFACE SCIENCE, 605 (2011) 1550

124. Lei Y, Lewandowski M, Sun YN, Fujimori Y, Martynova Y, Groot IMN, Meyer R, Giordano L, Pacchioni G, Goniakowski J, Noguera C, Shaikhutdinov S, Freund HJ  
[CO + NO vs CO + O<sub>2</sub> reaction on monolayer FeO\(111\) films on Pt\(111\)](#)  
CHEMCATCHEM 3 (2011) 671
123. Nilius N, Risse T, Schauerermann S, Shaikhutdinov S, Freund HJ  
[Model Studies in Catalysis](#)  
TOPICS IN CATALYSIS 54 (2011) 4
122. Lewandowski M, Sun YN, Qin ZH, Shaikhutdinov S, Freund HJ  
[Promotional effect of metal encapsulation on reactivity of iron oxide supported Pt catalysts](#)  
APPLIED CATALYSIS A 391 (2011) 407
121. Löffler D, Uhlrich JJ, Baron M, Lichtenstein L, Heinke L, Büchner C, Heyde M, Shaikhutdinov S, Freund HJ, Włodarczyk, Sierka M, Sauer J  
[Growth and structure of crystalline silica sheet on Ru\(0001\)](#)  
PHYS REV LETT 105 (2010) 146104
120. Giordano L, Lewandowski M, Groot I, Sun YN, Goniakowski J, Noguera C, Shaikhutdinov S, Pacchioni G, Freund HJ  
[Oxygen-induced transformations of an FeO\(111\) film on Pt\(111\): A combined DFT and STM study.](#)  
J PHYS CHEM C 114 (2010) 21504
119. Abbott HL, Aumer A, Lei Y, Asokan C, Meyer RJ, Shaikhutdinov S, Freund HJ  
[CO adsorption on monometallic and bimetallic Au-Pd nanoparticles supported on oxide thin films](#)  
J PHYS CHEM C 114 (2010) 17099
118. Freund HJ, Nilius N, Risse T, Shaikhutdinov S, Sterrer M  
[Ultradünne Oxidschichten auf Metallsubstraten: eine interessante Materialkombination](#)  
JAHRESBERICHT DER MAX-PLANCK-GESELLSCHAFT 2009
117. Sun YN, Giordano L, Goniakowski J, Lewandowski M, Qin ZH, Noguera C, Shaikhutdinov S, Pacchioni G, Freund HJ  
[The interplay between structure and CO oxidation catalysis on metal supported ultrathin oxide films](#)  
ANGEWANDTE CHEMIE INT. ED., 49 (2010) 4418
116. Abbott H, Uhl A, Baron M, Lei Y, Meyer R, Stacchiola D, Bondarchuk O, Shaikhutdinov S, Freund HJ,  
[Relating methanol oxidation to the structure of ceria-supported vanadia monolayer catalysts](#)  
J CATAL 272 (2010) 82
115. Bagus PS, Nelin CJ, Ilton ES, Baron M, Abbott H, Primorac E, Kühlenbeck H, Shaikhutdinov S, Freund HJ,  
[The Complex Core Level Spectra of CeO<sub>2</sub>: An Analysis in Terms of](#)

### Atomic and Charge Transfer Effects

CHEM PHYS LETT, 487 (2010) 237

114. Ganduglia-Pirovano MV, Popa C, Sauer J, Abbott H, Uhl A, Baron M, Stacchiola D, Bondarchuk O, Shaikhutdinov S, Freund HJ,  
[The role of ceria in oxidative dehydrogenation on supported vanadia catalysts](#)  
J AMER CHEM SOC, 132 (2010) 2345
113. Desikusumastuti A, Happel M, Qin Z-H, Staudt T, Lykhach Y, Laurin M, Shaikhutdinov S, Rohr F, Libuda J.  
[Particle size dependent interaction of NO<sub>2</sub> with Pd nanoparticles supported On model NO<sub>x</sub> storage materials](#)  
J PHYS CHEM C 113 (2009) 9755
112. Sun YN, Qin ZH, Lewandowski M, Carrasco E, Sterrer M, Shaikhutdinov S, Freund HJ  
[CO adsorption and dissociation on iron oxide supported Pt particles](#)  
SURFACE SCIENCE, 603 (2009) 3099
111. Sun YN, Qin ZH, Lewandowski M, Carrasco E, Sterrer M, Shaikhutdinov S, Freund HJ  
[Monolayer iron oxide film on platinum promotes low temperature CO oxidation](#)  
J CATAL, 266 (2009) 359
110. Baron M, Abbott H, Bondarchuk O, Stacchiola D, Uhl A, Shaikhutdinov S, Freund HJ, Popa C, Ganduglia-Pirovano MV, Sauer J,  
[Resolving the atomic structure of vanadia monolayer catalysts: Monomers, trimers and oligomers on ceria](#)  
ANGEWANDTE CHEMIE INT. ED. 48 (2009) 8006
109. Desikusumastuti A, Qin Z-H, Happel M, Staudt T, Lykhach Y, Laurin M, Rohr F, Shaikhutdinov S, Libuda J.  
[Nitrite and nitrate formation on model NO<sub>x</sub> storage materials: On the influence of particle size and composition](#)  
PHYS CHEM CHEM PHYS, 11 (2009) 2514
108. Baron M, Bondarchuk O, Stacchiola D, Shaikhutdinov S, Freund HJ,  
[Interaction of gold with cerium oxide supports: CeO<sub>2</sub>\(111\) thin films vs CeO<sub>x</sub> nanoparticles](#)  
J PHYS CHEM C 113 (2009) 6042
107. Qin ZH, Lewandowski M, Sun YN, Shaikhutdinov S, Freund HJ,  
[Morphology and CO adsorption on Pt supported on thin Fe<sub>3</sub>O<sub>4</sub>\(111\) films](#)  
J PHYS.: CONDENS MATTER 21 (2009) 134019.
106. Desikusumastuti A, Qin Z-H, Staudt T, Happel M, Lykhach Y, Laurin M, Shaikhutdinov S, Libuda J.  
[Controlling metal/oxide interactions in bifunctional nanostructured model catalysts: Pd and Bao on Al<sub>2</sub>O<sub>3</sub>/NiAl\(110\)](#)  
SURFACE SCIENCE LETTERS, 603 (2008) L9

105. Desikusumastuti A, Staudt T, Qin Z-H, Happel M, Laurin M, Lykhach Y, Shaikhutdinov S, Rohr F, Libuda J.  
[Interaction of NO<sub>2</sub> with model NSR catalysts: Metal oxide interaction controls initial NO<sub>x</sub> storage mechanism](#)  
CHEM PHYS CHEM, 9 (2008) 2191
104. Sun YN, Qin ZH, Lewandowski M, Kaya S, Shaikhutdinov S, Freund HJ  
[When an encapsulating oxide layer promotes reaction on noble metals: Dewetting and \*in situ\* formation of an "inverted" FeO<sub>x</sub>/Pt catalyst](#)  
CATALYSIS LETTERS, 126 (2008) 31
103. Kaya S, Weissenrieder J, Stacchiola D, Todorova TK, Sierka M, Sauer J, Shaikhutdinov S, Freund HJ  
[Formation of one dimensional molybdenum oxide on Mo\(112\)](#)  
SURFACE SCIENCE, 602 (2008) 3338
102. Risse T, Shaikhutdinov S, Nilius N, Sterrer M, Freund HJ  
[Gold supported on thin oxide films: from single atom to nanoparticles](#)  
ACC CHEM RES, 41 (2008) 949
101. Romanyshyn Yu, Guimond S, Kühlenbeck H, Kaya S, Blum RP, Niehus H, Shaikhutdinov S, Simic-Milosevic V, Nilius N, Freund HJ, Ganduglia-Pirovano V, Fortrie R, Döbler J, Sauer J,  
[Selectivity in methanol oxidation as studied on model systems involving vanadium oxides](#)  
TOPICS IN CATALYSIS, 50 (2008) 106
100. Qin ZH, Lewandowski M, Sun YN, Shaikhutdinov S, Freund HJ,  
[Encapsulation of Pt nanoparticles as a result of strong metal-support interaction with Fe<sub>3</sub>O<sub>4</sub>\(111\)](#)  
J PHYS CHEM C 112 (2008) 10209
99. Baron M, Stacchiola D, Ulrich S, Nilius N, Shaikhutdinov S, Freund HJ, Martinez U, Giordano S, Pacchioni G,  
[Adsorption of Au and Pd atoms on thin SiO<sub>2</sub> films: the role of atomic structure](#)  
J PHYS CHEM C 112 (2008) 3405
98. Desikusumastuti A, Laurin M, Happel M, Qin Z-H, Shaikhutdinov S, Libuda J  
[Extreme size effects in supported ionic nanoparticles: tailoring the stability of NO<sub>x</sub> storage catalysts](#)  
CATALYSIS LETTERS, 121 (2008) 311
97. Stacchiola D, Baron M, Kaya S, Weissenrieder J, Shaikhutdinov S, Freund HJ  
[Growth of stoichiometric sub-nm silica films](#)  
APPL PHYS LETT, 92 (2008) 011911
96. Uhl A, Sainio J, Lahtinen J, Shaikhutdinov S, Freund HJ  
[Preparation and structure of alumina supported niobia model catalysts](#)  
SURFACE SCIENCE, 601 (2007) 5605
95. Blum RP, Niehus H, Hucho C, Fortrie R, Ganduglia-Pirovano V, Sauer J, Shaikhutdinov S, Freund HJ

- Surface metal-insulator transition on a vanadium pentoxide (001) single crystal  
PHYS REV LETT, 99 (2007) 226103
94. Lu JL, Weissenrieder J, Kaya S, Gao HJ, Shaikhutdinov SK, Freund HJ  
[Structure, thermal stability and CO adsorption properties of Pd nanoparticles supported on an ultrathin SiO<sub>2</sub> film](#)  
SURF REV LETT, 14 (2007) 927
93. Kaya S, Baron M, Stacchiola D, Weissenrieder J, Shaikhutdinov S, Todorova TK, Sierka M, Sauer J, Freund HJ  
[On geometrical and electronic structure of an ultra-thin silica film grown on Mo\(112\)](#)  
SURFACE SCIENCE, 601 (2007), 4849
92. Sierka M, Todorova TK, Sauer J, Kaya S, Stacchiola D, Weissenrieder J, Shaikhutdinov S, Freund HJ  
[Oxygen adsorption on Mo\(112\) surface studied by ab initio genetic algorithm and experiment](#)  
J CHEMICAL PHYSICS 126 (2007) 234710
91. Lu JL, Gao HJ, Shi DX, Shaikhutdinov S, Freund HJ  
[Heterogeneous catalysis on an atomic scale](#)  
WUH (PHYSICS) 36 (2007) 370
90. Gonzales S, Neyman KM, Shaikhutdinov S, Freund HJ, Illas F  
[On the promoting role of Ag in selective hydrogenation reactions over Pd-Ag bimetallic catalysts: a theoretical study.](#)  
J PHYS CHEM C, 111(2007) 6852
89. Schalow T, Brandt B, Starr DE, Laurin M, Shaikhutdinov SK, Schauer mann S, Libuda J, Freund HJ  
[Particle size dependent adsorption and reaction kinetics on reduced and partially oxidized Pd nanoparticles](#)  
PHYS CHEM CHEM PHYS, 9 (2007) 1347
88. Kaya S, Sun YN, Weissenrieder J, Stacchiola D, Shaikhutdinov S, Freund HJ  
[Ice assisted preparation of silica supported vanadium oxide particles](#)  
J PHYS CHEM C 111 (2007) 5337
87. Lu JL, Gao HJ, Shaikhutdinov SK, Freund HJ  
[Gold supported on well-ordered ceria films: Nucleation, growth and morphology in CO oxidation reaction.](#)  
CATALYSS LETTERS, 114 (2007) 8
86. Kaya S, Weissenrieder J, Stacchiola D, Shaikhutdinov S, Freund HJ  
[Formation of an ordered ice layer on a thin silica film](#)  
J PHYS CHEM C 111 (2007) 759
85. Schalow T, Brandt B, Laurin M, Guimond S, Kühlenbeck H, Starr DE, Shaikhutdinov SK, Schauer mann S, Libuda J, Freund HJ  
[Formation and catalytic activity of partially oxidized Pd nanoparticles](#)  
TOPICS CATALYSIS, 42-43 (2007) 387

84. Stacchiola D, Kaya S, Weissenrieder J, Kuhlenbeck H, Shaikhutdinov S, Freund HJ, Sierka M, Todorova TK, Sauer J  
[Synthesis and structure of an ultra-thin aluminosilicate film](#)  
ANGEWANDTE CHEMIE INT. ED. 45 (2006) 7636
83. Stacchiola D, Kaya S, Weissenrieder J, Kuhlenbeck H, Shaikhutdinov S, Freund HJ, Sierka M, Todorova TK, Sauer J  
[Synthese und Struktur eines ultradünnen Alumosilicatfilms](#)  
ANGEWANDTE CHEMIE 45 (2006) 7636
82. Lu JL, Gao HJ, Shaikhutdinov SK, Freund HJ  
[Morphology and defect structure of the CeO<sub>2</sub>\(111\) films grown on Ru\(0001\) as studied by scanning tunneling microscopy](#)  
SURFACE SCIENCE 600 (2006) 5004
81. Mendes FMT, Uhl A, Starr DE, Guimond S, Schmal M., Kuhlenbeck H, Shaikhutdinov S, Freund HJ  
[Strong metal support interaction on Co/niobia model catalysts](#)  
CATALYSIS LETTERS, 111 (2006) 35
80. Guimond S, Abu Haja M, Kaya S, Lu J, Weissenrieder, Shaikhutdinov S, Kuhlenbeck H, Freund HJ, Döbblers J, Sauer J  
[Vanadium oxide surfaces and supported vanadium oxide nanoparticles](#)  
TOPICS IN CATALYSIS, 38 (2006) 117
79. Lu JL, Kaya S, Weissenrieder J, Todorova TK, Sierka M, Sauer J, Gao HJ, Shaikhutdinov S, Freund HJ  
[Formation of one-dimensional crystalline silica on a metal substrate](#)  
SURFACE SCIENCE LETTERS, 600 (2006), L164
78. Sierka M, Todorova TK, Kaya S, Weissenrieder J, Lu JL, Gao HJ, Shaikhutdinov S, Freund HJ, Sauer J  
[Interplay between theory and experiment in the quest for silica with reduced dimensionality grown on a Mo\(112\) surface](#)  
CHEMICAL PHYSICS LETTERS 424 (2006), 115
77. Lu JL, Kaya S, Weissenrieder J, Gao HJ, Shaikhutdinov S, Freund HJ  
[Low temperature CO induced growth of Pd supported on a monolayer silica film](#)  
SURFACE SCIENCE LETTERS, 600 (2006), L153
76. Khan NA, Uhl A, Shaikhutdinov S, Freund HJ  
[Alumina supported model Pd-Ag catalysts: A combined STM, XPS, TPD and IRAS study](#)  
SURFACE SCIENCE 600 (2006), 1849
75. Todorova TK, Sierka M, Sauer J, Kaya S, Weissenrieder J, Lu JL, Gao HJ, Shaikhutdinov S, Freund HJ  
[Atomic structure of a thin silica film on a Mo\(112\) substrate: A combined experimental and theoretical study](#)  
PHYSICAL REVIEW B 73 (2006), 165414

74. Khan NA, Shaikhutdinov S, Freund HJ  
[Acetylene and ethylene hydrogenation on alumina supported Pd-Ag model catalysts](#)  
CATALYSIS LETTERS 108 (2006), 159
73. Starr DE, Pazhetnov EM, Stadnichenko AI, Boronin AI, Shaikhutdinov S  
[Carbon films grown on Pt\(111\) as supports for gold model catalysts](#)  
SURFACE SCIENCE, 600 (2006), 2688
72. Schalow T, Brandt B, Starr DE, Laurin M, Shaikhutdinov SK, Schauermann S, Libuda J, Freund HJ  
[Size-dependent oxidation mechanism of supported Pd nanoparticles](#)  
ANGEW CHEM INT ED 45 (2006), 3693
71. Schalow T, Brandt B, Starr DE, Laurin M, Shaikhutdinov SK, Schauermann S, Libuda J, Freund HJ  
[Größenabhängiger Oxidationsmechanismus trägerfixierter Pd-Nanopartikel](#)  
ANGEW CHEM, 118 (2006), 3755
70. Schalow T, Brandt B, Starr DE, Laurin M, Schauermann S, Shaikhutdinov SK, Libuda J, Freund HJ  
[Oxygen-Induced Restructuring of a Pd/Fe<sub>3</sub>O<sub>4</sub> Model Catalyst](#)  
CATALYSIS LETTERS, 107 (2006), 189.
69. Schalow T, Laurin M, Brandt B, Schauermann S, Guimond S, Kuhlenbeck H, Starr DE, Shaikhutdinov SK, Libuda J, Freund HJ  
[Sauerstoffspeicherung an der Metall-Oxid-Grenzfläche von Katalysatornanopartikeln](#)  
ANGEWANDTE CHEMIE 117 (2005) 7773.
68. Schalow T, Laurin M, Brandt B, Schauermann S, Guimond S, Kuhlenbeck H, Starr DE, Shaikhutdinov SK, Libuda J, Freund HJ  
[Oxygen Storage at the Metal/Oxide Interface of Catalyst Nanoparticles](#)  
ANGEWANDTE CHEMIE INT ED, 44 (2005) 7601.
67. Starr DE, Shaikhutdinov S, Freund HJ  
[Gold Supported on Oxide Surfaces: Environmental Effects as Studied by STM](#)  
TOPICS IN CATALYSIS 36 (2005) 33
66. Starr DE, Mendes FMT, Middeke J, Blum R-P, Niehus H, Lahav D, Guimond S, Uhl A, Kluener T, Schmal M., Kuhlenbeck H, Shaikhutdinov S, Freund HJ  
[Preparation and characterization of well-ordered, thin niobia films on a metal substrate](#)  
SURFACE SCIENCE 599 (2005), 14
65. Weissenrieder J, Kaya S, Lu JL, Gao HJ, Shaikhutdinov S, Freund HJ, Sierka M, Todorova TK, Sauer J  
[Atomic structure of a thin silica film on a Mo\(112\) substrate: A two-dimensional network of SiO<sub>4</sub> tetrahedra](#)  
PHYSICAL REVIEW LETTERS 95 (2005), 076103
64. Meyer R, Lahav D, Schalow T, Laurin M, Brandt B, Schauermann S, Guimond S, Kluner T, Kuhlenbeck H, Libuda J, Shaikhutdinov S, Freund HJ

- CO adsorption and thermal stability of Pd deposited on a thin FeO(111) film  
SURFACE SCIENCE 586 (2005), 174
63. Lemire C, Bertarione S, Zecchina A, Scarano D., Chaka A., Shaikhutdinov S., Freund HJ.  
[Ferryll \(Fe=O\) termination of the hematite  \$\alpha\$ -Fe<sub>2</sub>O<sub>3</sub>\(0001\) surface](#)  
PHYSICAL REVIEW LETTERS 94 (2005), 166101
  62. Doyle AM, Shaikhutdinov SK, Freund HJ  
[Surface Bonded Precursor Determines Particle Size Effects for Alkene Hydrogenation on Pd Nanoparticles](#)  
ANGEWANDTE CHEMIE INT ED, 44 (2005) 629
  61. Doyle AM, Shaikhutdinov SK, Freund HJ  
[Oberflächengebundene Intermediate verursachen Teilchengrößeneinflüsse bei Alkenhydrierung auf Palladium](#)  
ANGEWANDTE CHEMIE 117 (2005), 635
  60. Henrich V, Shaikhutdinov SK  
[Atomic geometry of steps on metal-oxide single crystals](#)  
SURFACE SCIENCE 574 (2005) 306
  59. Lemire C, Meyer R, Henrich V, Shaikhutdinov SK, Freund HJ  
[The surface structure of Fe<sub>3</sub>O<sub>4</sub>\(111\) films as studied by CO adsorption](#)  
SURFACE SCIENCE 572 (2004), 103
  58. Meyer R, Lemire C, Shaikhutdinov SK, Freund HJ  
[Surface chemistry of catalysis by gold](#)  
GOLD BULLETIN 37 (2004), 72
  57. Meyer R, Shaikhutdinov SK, Freund HJ  
[CO oxidation on a Pd/Fe<sub>3</sub>O<sub>4</sub>\(111\) model catalyst](#)  
ZEITSCHRIFT FÜR PHYSIKALISCHE CHEMIE, 218 (2004), 905
  56. Doyle AM, Shaikhutdinov SK, Freund HJ  
[Alkene chemistry on the palladium surface: nanoparticles vs single crystals](#)  
JOURNAL OF CATALYSIS 223 (2004), 444
  55. Lemire C, Meyer R, Shaikhutdinov SK, Freund HJ  
[CO adsorption on oxide supported gold: from small clusters to monolayer islands and three-dimensional nanoparticles](#)  
SURFACE SCIENCE 552 (2004), 27
  54. Hartmann N, Schaak A, Shaikhutdinov S, et al.  
[Imaging surface topographical changes during plastic deformation of a metal with chemical wave patterns](#)  
SURFACE SCIENCE 548 (2004), 163
  53. Lemire C, Meyer R, Shaikhutdinov S, Freund HJ  
[Do quantum size effects control CO adsorption on gold nanoparticles?](#)  
ANGEWANDTE CHEMIE INT ED 43 (2004), 118
  52. Lemire C, Meyer R, Shaikhutdinov S, Freund HJ

Steuern Größenquantisierungseffekte die CO-Adsorption auf Au-Nanopartikeln?

ANGEWANDTE CHEMIE 116(2003), 121

51. Meyer R, Bäumer M, Shaikhutdinov SK, Freund HJ  
[Two-dimensional growth of Pd on a thin FeO\(111\) film: a physical manifestation of strong metal-support interaction](#)  
SURFACE SCIENCE LETTERS 546 (2003), L813
50. Doyle AM, Shaikhutdinov SK, Jackson SD, Freund HJ  
[Hydrogenation on metal surfaces: Why are nanoparticles more active than single crystals?](#)  
ANGEWANDTE CHEMIE INT ED 42 (2003), 5240
49. Doyle AM, Shaikhutdinov SK, Jackson SD, Freund HJ  
[Hydrierung an Metalloberflächen: Warum sind Nanoteilchen aktiver als Einkristalle?](#)  
ANGEWANDTE CHEMIE 115 (2003), 5398
48. Shaikhutdinov SK, Meyer R, Lahav D, et al.  
[Determination of atomic structure of the metal-oxide interface: Pd nanodeposits on an FeO\(111\) film](#)  
PHYSICAL REVIEW LETTERS 91 (2003), 076102
47. Freund HJ, Bäumer M, Libuda J, Risse T, Rupprechter G, Shaikhutdinov SK  
[Preparation and characterization of model catalysts: from ultrahigh vacuum to in situ conditions at the atomic dimension](#)  
JOURNAL OF CATALYSIS 216 (2003), 223
46. Shaikhutdinov SK, Meyer R, Naschitzki M, et al.  
[Size and support effects for CO adsorption on gold model catalysts](#)  
CATALYSIS LETTERS 86 (2003), 211
45. Heemeier M, Stempel S, Shaikhutdinov SK, et al.  
[On the thermal stability of metal particles supported on a thin alumina film](#)  
SURFACE SCIENCE 523 (2003), 103
44. Shaikhutdinov SK, Frank M, Bäumer M, et al.  
[Effect of carbon deposits on reactivity of supported Pd model catalysts](#)  
CATALYSIS LETTERS 80 (2002), 115
43. Shaikhutdinov S, Heemeier M, Hoffmann J, et al.  
[Interaction of oxygen with palladium deposited on a thin alumina film](#)  
SURFACE SCIENCE 501 (2002), 270
42. Shaikhutdinov SK, Heemeier M, Bäumer M, et al.  
[Particle size effects in adsorption and reaction of ethene and hydrogen on palladium model catalysts.](#)  
ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY 221 (2001), 334
41. Shaikhutdinov S, Heemeier M, Bäumer M, et al.  
[Structure-reactivity relationships on supported metal model catalysts:](#)

- Adsorption and reaction of ethene and hydrogen on Pd/Al<sub>2</sub>O<sub>3</sub>/NiAl(110)  
JOURNAL OF CATALYSIS 200 (2001), 330
40. Shaikhutdinov SK, Savinova ER, Scheybal A, et al.  
[Ex situ scanning tunneling microscopy study of under-potential oxidation of a Ag\(111\) electrode in an alkaline electrolyte](#)  
J ELECTROANAL CHEM 500 (2001), 208
  39. Shaikhutdinov S, Ritter M, Weiss W  
[Hexagonal heterolayers on a square lattice: A combined STM and LEED study of FeO\(111\) on Pt\(100\)](#)  
PHYSICAL REVIEW B 62 (2000), 7535
  38. Shaikhutdinov S, Weiss W  
[Adsorbate dynamics on iron oxide surfaces studied by scanning tunneling microscopy](#)  
J MOL CATAL A 158 (2000), 129
  37. Shaikhutdinov SK, Weiss W, Schlogl R  
[Interaction of potassium with Fe<sub>3</sub>O<sub>4</sub>\(111\) at elevated temperatures](#)  
APPLIED SURFACE SCIENCE 161 (2000), 497
  36. Shaikhutdinov SK, Joseph Y, Kuhrs C, et al.  
[Structure and reactivity of iron oxide surfaces](#)  
FARADAY DISCUSSIONS 114 (1999), 363
  35. Shaikhutdinov SK, Ritter M, Wang XG, et al.  
[Defect structures on epitaxial Fe<sub>3</sub>O<sub>4</sub>\(111\) films](#)  
PHYSICAL REVIEW B 60 (1999), 11062
  34. Shaikhutdinov SK, Weiss W  
[Oxygen pressure dependence of the  \$\alpha\$ -Fe<sub>2</sub>O<sub>3</sub>\(0001\) surface structure](#)  
SURFACE SCIENCE LETTERS 432 (1999), L627
  33. Shaikhutdinov SK, Schildenberger M, Noeske M, et al.  
[Platinum colloid supported on graphite: X-ray photoelectron spectroscopy study](#)  
REACT KINET CATAL LETT 67 (1999), 129
  32. Schaak A, Shaikhutdinov S, Imbihl R  
[H/D-isotope effects in chemical wave propagation on surfaces: the O<sub>2</sub>+H<sub>2</sub> and NO+H<sub>2</sub> reactions on Rh\(110\) and Rh\(111\)](#)  
SURFACE SCIENCE 421 (1999), 191
  31. Avdeeva LB, Kochubey DI, Shaikhutdinov SK  
[Cobalt catalysts of methane decomposition: accumulation of the filamentous carbon](#)  
APPLIED CATALYSIS A 177 (1999), 43
  30. Wang X-G, Weiss W, Shaikhutdinov SK, Ritter M, Petersen M, Wagner F, Schlogl R, Scheffler M.  
[The hematite  \$\alpha\$ -Fe<sub>2</sub>O<sub>3</sub> \(0001\) surface: evidence for domains of distinct chemistry.](#)  
PHYSICAL REVIEW LETTERS, 81 (1998), 1038

29. Kochubey DI, Kim TK, Babenko VP, Shaikhutdinov SK  
[Charge density waves in 1T-TaS<sub>2</sub>: an EXAFS study](#)  
PHYSICA B 252 (1998), 15
28. Shaikhutdinov SK, Aires FJCS  
[Evolution of the rhodium colloid supported on graphite studied by atomic force microscopy in the tapping mode](#)  
LANGMUIR 14 (1998), 3501
27. Kim TK, Babenko VP, Novgorodov BN, Shaikhutdinov SK, Kochubey DI  
[Destruction of the charge density wave structure in 1T-TaS<sub>2</sub> under pyridine intercalation](#)  
NUCL INSTR & METHODS IN PHYS RES A 405 (1998), 348
26. Shaikhutdinov SK  
[STM observation of the Ni\(100\) surface with segregated carbon](#)  
SURFACE SCIENCE LETTERS 395 (1998), L215
25. Kvon RI, Boronin AI, Shaikhutdinov SK, Buyanov RA.  
[XPS and STM study of carbon deposits at the surface of platinum \(110\)](#)  
APPLIED SURFACE SCIENCE 120 (1997), 239
24. Shaikhutdinov SK, Schaak A, Imbihl R  
[Formation of low work function patches in the NO+H<sub>2</sub> reaction on a roughened Rh\(110\) surface](#)  
SURFACE SCIENCE LETTERS 391 (1997), L1172
23. Shaikhutdinov SK, Avdeeva LB, Novgorodov BN, et al.  
[Nickel catalysts supported on carbon nanofibers: structure and activity in methane decomposition](#)  
CATALYSIS LETTERS 47 (1997), 35
22. Fenelonov VB, Derevyankin AY, Okkel LG,... Shaikhutdinov SK....  
[Structure and texture of filamentous carbons produced by methane decomposition on Ni and Ni-Cu catalysts](#)  
CARBON 35 (1997), 1129
21. Shaikhutdinov SK, Boronin AI, Kvon RI  
[Carbon on the Pt\(110\) surface: A scanning tunnelling microscopy study](#)  
SURFACE SCIENCE 382 (1997), 187
20. Shaikhutdinov SK, Babenko VP, Kochubey DI  
[Bias dependent corrugation of charge density waves in 1T-TaS<sub>2</sub> studied by scanning tunneling microscopy and spectroscopy](#)  
PHYSICS OF LOW DIMENSIONAL STRUCTURES 11/12 (1996),109
19. Shaikhutdinov SK, Zaikovskii VI, Avdeeva LB  
[Coprecipitated Ni-alumina and Ni-Cu-alumina catalysts of methane decomposition and carbon deposition .3. Morphology and surface structure of the carbon filaments](#)  
APPLIED CATALYSIS A 148 (1996), 123

18. Shaikhutdinov SK, Möller FA, Mestl G, Behm RJ  
[Electrochemical deposition of platinum hydrosol on graphite observed by scanning tunneling microscopy](#)  
JOURNAL OF CATALYSIS 163 (1996) 492
17. Avdeeva LB, Goncharova OV, Kochubey DI,.... Shaikhutdinov SK  
[Coprecipitated Ni-alumina and Ni-Cu-alumina catalysts of methane decomposition and carbon deposition: 2. Evolution of the catalysts in reaction](#)  
APPLIED CATALYSIS A-GENERAL 141 (1996) 117
16. Witek G, Noeske M, Mestl G, Shaikhutdinov SK , Behm RJ  
[Interaction of platinum colloids with single crystalline oxide and graphite substrates: A combined AFM, STM and XPS study](#)  
CATALYSIS LETTERS 37 (1996) 35
15. Shaikhutdinov SK  
[Applicability of scanning-tunneling-microscopy for studying metal-catalysts supported on carbon supports](#)  
KINETICS AND CATALYSIS 36 (1995), 549
14. Shaikhutdinov SK, Avdeeva LB, Goncharova OV, et al.  
[Coprecipitated Ni-Al and Ni-Cu-Al catalysts for methane decomposition and carbon deposition:1. Genesis of calcined and reduced catalysts](#)  
APPLIED CATALYSIS A-GENERAL 126 (1995), 125
13. Shaikhutdinov SK, Shupik AN, Trukhan EM, Turte KI  
[Microwave dielectric loss and dynamic electron delocalization in trinuclear  \$\mu\$ -3-oxo-iron clusters](#)  
MENDELEEV COMMUNICATIONS 4 (1994), 217
12. Shaikhutdinov SK, Kochubey DI  
[Scanning-tunneling-microscopy studies of heterogenous catalysts and their models](#)  
USPEKHI KHIMII (RUSSIAN CHEMICAL REVIEWS) 62 (1993), 443
11. Shaikhutdinov SK, Kochubey DI  
[Scanning-tunneling-microscopy study of porous carbon impregnated with palladium-chloride](#)  
CATALYSIS LETTERS 28 (1994), 343
10. Kuznetsov VL, Chuvilin AL, Moroz EM,...Shaikhutdinov SK  
[Effect of explosion conditions on the structure of detonation soots - ultradisperse diamond and onion carbon](#)  
CARBON 32 (1994), 873
9. Shaikhutdinov SK, Kochubey DI  
[Scanning tunnelling microscope based on an Auger-spectrometer and its application to studying highly dispersed carbon materials](#)  
JOURNAL OF STRUCTURAL CHEMISTRY 34 (1993), 956
8. Shaikhutdinov SK, Shupik AN, Trukhan EM  
[Microwave dielectric loss in polycrystalline 3d metal-complexes](#)

JOURNAL OF THE CHEMICAL SOCIETY-FARADAY TRANSACTIONS 89 (1993),  
3959

7. Ilyinich OM, Shaikhutdinov SK  
[A membranous method for pretreating the blood for analysis of low-molecular metabolites](#)  
LABORATORNOE DELO 4 (1990), 64
6. Shaikhutdinov SK, Shupik AN, Fushman EA, et al.  
[On chemical nature of defects in polyphenylacetylene](#)  
VYSOKOMOLEKULYARNYE SOEDINENIYA (RUS. J. POLYMER SCIENCE) A 30  
(1988), 257
5. Astanina AN, Volkov VI, Smirnova GL, Shaikhutdinov SK.....  
[Perfluorated Cu-containing membranes in the process of sodium sulfide oxidation](#)  
ZHURNAL FIZICHESKOI KHIMII 61 (1987), 2802
4. Shaikhutdinov SK et al.  
[Correlation between microwave conductivity and Mössbauer spectra of iron containing compounds](#)  
KOORDINATSIONNAYA KHIMIYA (RUS. J. COORDINATION CHEMISTRY), 1986
3. Shaikhutdinov SK, Astanina AN, Panova GV, et al.  
[Microwave conductivity of copper\(II\) chelates with Schiff bases](#)  
ZHURNAL FIZICHESKOI KHIMII (RUS. J. PHYS. CHEM.) 61 (1987), 228
2. Astanina AN, Trukhan EM, Turte KI, Shaikhutdinov SK  
[Conductivity of some poly-nuclear ferrum carboxylates](#)  
DOKLADY AKADEMII NAUK SSSR 288 (1986), 1391
1. Shaikhutdinov SK, Trukhan EM, Astanina AN, et al.  
[Microwave conductivity and catalytic activity of copper-complexes with anionites](#)  
ZHURNAL FIZICHESKOI KHIMII (RUS. J. PHYS. CHEM.) 60 (1986), 997