

Non-equilibrium lattice dynamics of one-dimensional In chains on Si(111) upon ultrafast optical excitation

T. Frigge, B. Hafke, T. Witte, **B. Krenzer**, M. Horn-von Hoegen
Structural Dynamics **5**, 025101 (2018)

Nanoscale interfacial heat transport of ultrathin epitaxial hetero films: Few monolayer Pb(111) on Si(111)

T. Witte, T. Frigge, B. Hafke, **B. Krenzer**, M. Horn-von Hoegen
Applied Physics Letters **110**, 243103 (2017)

Optically excited structural transition in atomic wires on surfaces at the quantum limit

T. Frigge, B. Hafke, T. Witte, **B. Krenzer**, C. Streubühr, A. Samad Syed, V. Mikšić Trontl, I. Avigo, P. Zhou, M. Liggges, D. von der Linde, U. Bovensiepen, M. Horn-von Hoegen, S. Wippermann, A. Lücke, S. Sanna, U. Gerstmann, W. G. Schmidt
Nature **544**, 207 (2017)

Two-dimensional interaction of spin chains in the Si(553)-Au nanowire system

B. Hafke, T. Frigge, T. Witte, **B. Krenzer**, J. Aulbach, J. Schäfer, R. Claessen, S. C. Erwin, M. Horn-von Hoegen
Physical Review B **94**, 161403 (2016)

Nanoscale thermal transport in selforganized epitaxial Ge nanostructures on Si(001)

T. Frigge, B. Hafke, V. Tinnemann, T. Witte, **B. Krenzer**, M. Horn-von Hoegen
Semiconductor Science and Technology **30**, 105027 (2015)

Nanoscale heat transport from Ge hut, dome and relaxed clusters on Si(001) measured by ultrafast electron diffraction

T. Frigge, B. Hafke, V. Tinnemann, **B. Krenzer**, M. Horn-von Hoegen
Applied Physics Letters **106**, 053108 (2015)

Hysteresis proves that the In/Si(111) (8x2) to (4x1) phase transition is first-order

F. Klasing, T. Frigge, B. Hafke, S. Wall, **B. Krenzer**, A. Hanisch-Blicharski, M. Horn-von Hoegen
Physical Review B **89**, 121107 (2014)

Comment on 'Atomistic picture of charge density wave formation at surfaces' reply

T. Frigge, S. Wall, **B. Krenzer**, St. Wippermann, S. Sanna, F. Klasing, A. Hanisch-Blicharski, M. Kammler, W. G. Schmidt, M. Horn-von Hoegen
Physical Review Letters **111**, 149602 (2013)

**Ultra-fast electron diffraction at surfaces:
From nanoscale heat transport to driven phase transitions**

A. Hanisch-Blicharski, A. Janzen, **B. Krenzer**, S. Wall, F. Klasing, A. Kalus, T. Frigge, M. Kammler, M. Horn-von Hoegen
Ultramicroscopy **127**, 2 (2013)



Dr. BORIS KRENZER

Consulting in Research & Development

Vogelbeerweg 21
 40880 Ratingen
 Germany

Phone +49 2102 149 909 4
 Mobile +49 151 403 053 98

mail@boris-krenzer-beratung.de
 www.boris-krenzer-beratung.de

An atomistic picture of charge density wave formation at surfaces

S. Wall, **B. Krenzer**, St. Wippermann, S. Sanna, F. Klasing, A. Hanisch-Blicharski, M. Kammler, W. G. Schmidt, M. Horn-von Hoegen
Physical Review Letters **109**, 186101 (2012)

Heat transport through interfaces with and without misfit dislocation arrays

A. Hanisch-Blicharski, **B. Krenzer**, S. Wall, A. Kalus, T. Frigge, M. Horn-von Hoegen
Journal of Materials Research **27**, 2718 (2012)

Ultrafast timeresolved electron diffraction of strongly driven phase transitions on silicon surfaces

S. Möllenbeck, A. Hanisch-Blicharski, P. Schneider, M. Ligges, P. Zhou, M. Kammler, **B. Krenzer**, and M. Horn-von Hoegen
MRS Symposium Proceedings **1230E**, MM03-09 (2010)

Transient cooling of ultrathin epitaxial Bi(111)-films on Si(111) upon femtosecond laser excitation studied by ultrafast reflection high energy electron diffraction

A. Hanisch-Blicharski, **B. Krenzer**, S. Möllenbeck, M. Ligges, P. Zhou, M. Kammler, M. Horn-von Hoegen
MRS Symposium Proceedings **1172**, T04-08 (2009)

Phonon confinement effects in ultrathin epitaxial bismuth films on silicon studied by time-resolved electron diffraction

B. Krenzer, A. Hanisch-Blicharski, P. Schneider, Th. Payer, S. Möllenbeck, O. Osmani, M. Kammler, R. Meyer, M. Horn-von Hoegen
Physical Review B **80**, 024307 (2009)

Epitaxial Bi(111) films on Si(001): Strain state, surface morphology, and defect structure

H. Hattab, E. Zubkov, A. Bernhart, G. Jnawali, C. Bobisch, **B. Krenzer**, M. Acet, R. Möller, M. Horn-von Hoegen
Thin Solid Films **516**, 8227 (2008)

Zeitaufgelöste Elektronenbeugung

B. Krenzer
Essener Unikate **32**, Physik: Energieumwandlungen an Oberflächen, Uni Duisburg-Essen, (2008)

Nanopattern formation by a periodic array of interfacial misfit dislocations in Bi(111)/Si(001) heteroepitaxy

G. Jnawali, H. Hattab, C. Bobisch, A. Bernhart, E. Zubkov, F.-J. Meyer zu Heringdorf, R. Möller, **B. Krenzer**, M. Horn-von Hoegen
MRS Symposium Proceedings **1059**, 1059-KK07-07 (2008)

Heat transport in nanoscale heterosystems: a numerical and analytical study

B. Krenzer, A. Hanisch, A. Duvenbeck, B. Rethfeld, M. Horn-von Hoegen
Journal of Nanomaterials **2008**, 590609 (2008)



Dr. BORIS KRENZER
 Consulting in Research & Development

Vogelbeerweg 21
 40880 Ratingen
 Germany
 Phone +49 2102 149 909 4
 Mobile +49 151 403 053 98
 mail@boris-krenzer-beratung.de
 www.boris-krenzer-beratung.de

Thermal response of epitaxial thin Bi films on Si(001) upon femtosecond laser excitation studied by ultrafast electron diffraction

A. Hanisch, **B. Krenzer**, T. Pelka, S. Möllenbeck, M. Horn-von Hoegen
Physical Review B **77**, 125410 (2008)

***Lattice-matching periodic array of misfit dislocations:
Heteroepitaxy of Bi(111) on Si(001)***

G. Jnawali, H. Hattab, F.-J. Meyer zu Heringdorf, **B. Krenzer**, M. Horn-von Hoegen
Physical Review B **76**, 035337 (2007)

A pulsed electron gun for ultrafast electron diffraction at surfaces

A. Janzen, **B. Krenzer**, O. Heinz, P. Zhou, D. Thien, A. Hanisch,
F.-J. Meyer zu Heringdorf, D. von der Linde, M. Horn-von Hoegen
Review of Scientific Instruments **78**, 013906 (2007)

***Lattice accomodation of epitaxial Bi(111) films on Si(001)
studied with SPA-LEED and AFM***

G. Jnawali, H. Hattab, **B. Krenzer**, M. Horn-von Hoegen
Physical Review B **74**, 195340 (2006)

Ultrafast electron diffraction at surfaces after laser excitation

A. Janzen, **B. Krenzer**, P. Zhou, D. von der Linde, M. Horn-von Hoegen
Surface Science **600**, 4094 (2006)

***Thermal boundary conductance in heterostructures studied by
ultrafast electron diffraction***

B. Krenzer, A. Janzen, P. Zhou, D. von der Linde, M. Horn-von Hoegen
New Journal of Physics **8**, 190 (2006)

***Long-period surface structure stabilized by Fermi surface nesting:
Cu(001)-(v20xv20)R26.6°-In***

T. Nakagawa, H.W. Yeom, E. Rotenberg, **B. Krenzer**, S.D. Kevan,
H. Okuyama, M. Nishijima, T. Aruga
Physical Review B **73**, 075407 (2006)

Indium v7 x v3 on Si(111): A nearly free electron metal in two dimensions

E. Rotenberg, H. Koh, K. Rossnagel, H.W. Yeom, J. Schäfer,
B. Krenzer, M.P. Rocha, S.D. Kevan
Physical Review Letters **91**, 246404 (2003)



Dual nature of a charge-density-wave transition on In/Cu(001)

T. Nakagawa, H. Okuyama, M. Nishijima, T. Aruga, H.W. Yeom,
E. Rotenberg, **B. Krenzer**, S.D. Kevan
Physical Review B **67**, 241401(R) (2003)

***Mesoscopic-scale growth of oxygen-rich films on Ru(0001) investigated
by photoemission electron microscopy***

A. Böttcher, **B. Krenzer**, H. Conrad, H. Niehus
Surface Science **504**, 42 (2002)

Dr. BORIS KRENZER

Consulting in Research & Development

Vogelbeerweg 21
40880 Ratingen
Germany

Phone +49 2102 149 909 4
Mobile +49 151 403 053 98
mail@boris-krenzer-beratung.de
www.boris-krenzer-beratung.de

Mesoscopic-scale pattern formation induced by oxidation of Ru(0001)

A. Böttcher, **B. Krenzer**, H. Conrad, H. Niehus
Surface Science 466, L811 (2000)

The formation of carbonate on Ag(110) studied by high-resolution EELS

L. Constant, **B. Krenzer**, W. Stenzel, H. Conrad, A. M. Bradshaw
Surface Science 427-428, 262 (1999)

A high resolution electron energy loss spectroscopy study of the Fermi-resonance of CO₂ adsorbed on a Ag(110)/CO₃ layer

B. Krenzer L. Constant, H. Conrad
Journal of Chemical Physics 111, 1288 (1999)

Carbonate formation by reacting CO₂ with an O₂ layer on Ag(110) studied by high resolution electron energy loss spectroscopy

B. Krenzer, L. Constant, H. Conrad
Surface Science 443, 116 (1999)



Dr. BORIS KRENZER
Consulting in Research & Development

Vogelbeerweg 21
40880 Ratingen
Germany
Phone +49 2102 149 909 4
Mobile +49 151 403 053 98
mail@boris-krenzer-beratung.de
www.boris-krenzer-beratung.de