

RESEARCH, CREATIVE, AND PROFESSIONAL ACTIVITIES

Colleagues involved in published Fargo projects

NDSU (students of my group at NDSU)

Postdocs

Dr. Jinhai Wang
Dr. Evgueni Kadossov
Dr. Junjun Shan
Dr. Z. Yu
Dr. Ashish Chakradhar

Graduate students

Shamus Funk (PhD)
John Goering (Master)
Mallikharjuna Komarneni (PhD)
Ashish Chakradhar (PhD)
N. Sivapragasam (PhD)
N.M.K.G.M. Tilan Abeyrathna (PhD)

Undergraduate students

Brian Hokkanen
Elliott Johnson
Tarik Nurkic
Shweta Sah
Andrew Sand
Catherine Bartholomew

ND state collaborations

Prof. Dimitri Kilin (NDSU)
Prof. Mark Hoffmann (University of North Dakota, UND)
Prof. Nuri Ocel (University of North Dakota, UND)
Prof. Deniz Cakir (University of North Dakota, UND)

National collaborations

Dr. G. Bozzolo (NASA Glenn Research Center, Ohio)
Profs. N.J. Turro, Stephen O'Brien (Columbia University, New York)
B. White (grad. student, Columbia University, New York)
Prof. Ya-Ping Sun (Clemson University, SC)
Drs. Z.Q. Yu, S. Thevuthasan, L.V. Saraf (PNNL - Pacific Northwest National Laboratories)
Dr. S. Cabrini (Molecular Foundry - Berkeley)
Dr. S. Dhuey (Molecular Foundry - Berkeley)
Dr. L. Ocola (Argonne National Laboratory)
Dr. M. Lu (Brookhaven National Laboratories)
Drs. K.W. Street, P.B. Abel (NASA Glenn Research Center)
Chia-Ming Wu, Rui Peng, Srujan Mishra, S. Phil Ahrenkiel, Prof. Ranjit T. Koodali (University of South Dakota)

International collaborations

Dr. J.E. Garcés (Argentina)
Prof. P. Schmuki (Germany)
A. Ghicov (Germany, grad. student)
Indhumati Paramasivam (Germany, postdoc)
Yulia Tsverina, Dr. A. Zak, Dr. Yishay Feldman, Prof. Reshef Tenne (Weizmann Institute of Science, Israel)

CITATIONS

This appears to be an important topic; otherwise, I would not have included it. According to “Web of Science,” I am aware of ~404 citations (November 2009, excluding self-citations) of my publications. For some publications, the number of citations has been indicated below. One of my first publications from 1990 is still cited (19 times in the meanwhile, 2009). The most cited papers out of my list are #36, with ~55 citations, and #19, with ~62 citations. Most cited paper from NDSU appears to be #63 with 10 citations (2009). I have not looked at all publications.

In 2013, the number of citations did increase to ~800 according to “SciFinder”. In 2015, ~1000.

2016 (5)

- 125 *Adsorption Kinetics and Dynamics of CO₂ on Ru(0001) Supported Graphene Oxide*, **Journal of Physical Chemistry C**, 2016, **120 (49)**, pp 28049–28056
by Nilushni Sivapragasam, Mindika T. Nayakasinghe, and Uwe Burghaus
DOI: 10.1021/acs.jpcc.6b09573
[Impact factor 4.509 \(in 2016\)](#)
- 124 *Adsorption of n-butane on graphene/Ru(0001) – a molecular beam scattering study*, **J. Vac. Sci. Technol. A** 34(4), Jul/Aug 2016, 041404
by Nilushni Sivapragasam, Mindika T. Nayakasinghe, and Uwe Burghaus
doi: 10.1116/1.4954811
<http://dx.doi.org/10.1116/1.4954811>
[Impact factor 2.322 \(in 2014\)](#)
- 123 *Adsorption of water on two-dimensional crystals: water/graphene and water/silicatene* (short review)
Inorganics 2016, 4, 10
by Uwe Burghaus
doi:10.3390/inorganics4020010
Open access journal, <http://www.mdpi.com/journal/inorganics/editors>
Abstract: <http://www.mdpi.com/2304-6740/4/2/10/>
HTML Version: <http://www.mdpi.com/2304-6740/4/2/10/html>
PDF Version: <http://www.mdpi.com/2304-6740/4/2/10/pdf>
- 122** DEPOSITED INORGANIC NANOSTRUCTURE HYBRIDS, USES THEREOF AND PROCESSES FOR THEIR PREPARATION,
US Patent Accepted January 26, 2016 under US Patent Number 9242231
by R. Tenne, Y. Tsverin, U. Burghaus, Mallikharjuna Rao Komarneni
- 121 *Water adsorption on two-dimensional silica films*,
Applied Surface Science 364 (2016) 822–828,
by M. T. Nayakasinghe, A. Chakradhar, N. Sivapragasam, and U. Burghaus
<http://dx.doi.org/10.1016/j.apsusc.2015.12.223>
- 120 *Adsorption kinetics of benzene on CVD graphene: an ultra-high vacuum study*,
Journal of Vacuum Science & Technology A 34, 021402 (2016),
by Ashish Chakradhar, Nilushni Sivapragasam, Mindika T. Nayakasinghe, and Uwe Burghaus
doi: 10.1116/1.4936337
<http://dx.doi.org/10.1116/1.4936337>

2015 (2)

- 119 *Problems in Statistical Thermodynamics*, textbook, (2015)
by U. Burghaus
313 pages, 600 problems, Paperback, CD (PowerPoint class) included
ISBN-10: 0991153049 ISBN-13: 978-0-9911530-4-6
(self-published, see www.LatheCity.com)
- 118** Support effects in the adsorption of water on CVD graphene: an ultra-high vacuum adsorption study,
Chemical Communications 51 (2015) 11463 - 11466
by A. Chakradhar, N. Sivapragasam, M. T. Nayakasinghe and U. Burghaus
DOI: 10.1039/C5CC03827H
► Higher impact factor journal, 6.718 (2015)

2014 (3)

- 117 *Reactivity and morphology of MCM-48 supported Ni, Mo, MoNi towards thiophene hydrodesulphurization*,
Surface Review and Letters 21 (2014) 1450060
by Catherine Bartholomew, A. Chakradhar, U. Burghaus, Chia-Ming Wu, Rui Peng, Srujan Mishra, S. Phil Ahrenkiel, Ranjit T. Koodali, Jonas Baltrusaitis, Gautam Mishra
- 116** Adsorption of water on graphene/Ru(0001)—an experimental ultra-high vacuum study,
Chemical Communications 57 (2014) 7698 – 7701,
A. Chakradhar, U. Burghaus
► Higher impact factor journal, 6.718 (2015)
funding ACS PRF
- 115** *Surface Chemistry of CO₂ -Adsorption of Carbon Dioxide on Clean Surfaces at Ultra-high Vacuum*, Review, Published by Elsevier,
Progress in Surface Science 89 (2014) 161-217, (56 pages), review
by U. Burghaus
► Higher impact factor journal, 8.288 (2015)
► Downloaded or viewed 1469 times (March 2015) according to Elsevier
► Downloaded or viewed 1781 times (June 2015) according to Elsevier
► 2 citations (June 2015) according to SciFinder
► 14 citations (2016) in Scopus, 15 citations (2016) in SciFinder

2013 (5)

- 114 *Benzene adsorption on Ru(0001) and graphene/Ru(0001) — How to synthesize epitaxial graphene without STM or LEED?*,
Chemical Physics Letters, 590 (2013) 146 – 152,
by A. Chakradhar, K.M. Trettel,* and U. Burghaus
*NSF REU fellow
► Downloaded or viewed 209 times (June 2014) according to Elsevier
- 113 *Butane adsorption on silica supported MoOx clusters nanofabricated by electron beam lithography*, **Conference proceedings** in Nanotechnology for Sustainable Energy, **ACS Book Series**, printed by Oxford University Press, Y.H. Hu, U. Burghaus, S. Qiao (Eds.) ISBN 978-0-8412-2813-9, (2013) by Shan, J., Chakradhar, A., Komarneni, M., Kadossov, E., Schmidt, J., Burghaus, U., Rosenmann, D., Ocola, L. E., Dhuey, S. Cabrini, S.,

- 112 *Carbon dioxide adsorption on MgO(001) – CO₂ kinetics and dynamics*,
Surface Science 616 (2013) 171-177
 by A. Chakradhar, U. Burghaus
 ►4 citations (June 2015)
- 111 *Surface Science Studies of Carbon Dioxide Chemistry*,
 chapter 3, in NEW AND FUTURE DEVELOPMENTS IN CATALYSIS: ACTIVATION
 OF CARBON DIOXIDE
 S.L. Suib (Volume Editor), Publisher **Elsevier**
<http://dx.doi.org/10.1016/B978-0-44-453882-6.00003-6>
 by U. Burghaus
- 110 *Applications of Electron Beam Lithography in Surface Science and Catalysis – Model-
 Nano-Array Catalysts*,
 Book Chapter, **Royal Society of Chemistry**, RSC, Catalysis Volume 25, JJ Spivey (Ed.)
 Catalysis: Volume 25, 2013, **25**, 141-171, ISBN : 9781849735780
<http://pubs.rsc.org/en/content/ebook/978-1-84973-578-0>
 DOI of the book 10.1039/9781849737203
 DoE of this chapter 10.1039/9781849737203-00141
 by U. Burghaus
- 2012 (5)**
- 109 *Characterization of Ni coated WS₂ nanotubes for hydrodesulfurization catalysis*,
Israel Journal of Chemistry, 52 (2012) 1053-1062
 by Mallikharjuna Rao Komarneni, Z.Yu, U. Burghaus, Yulia Tsverina, A. Zak, Yishay
 Feldman, Reshef Tenne
- 108 *Rim effects in the adsorption of CO₂ on silica supported copper oxide clusters - utilizing
 electron beam lithography*,
Journal of Physical Chemistry C, 116 (2012) 18930-18936,
 by J. Shan, A. Chakradhar, M. Komarneni, U. Burghaus
- 107 *Identifying rims along nano-sized clusters as catalytically active sites – the case of
 CuOx/silica model catalysts nanofabricated by electron beam lithography*,
Chemical Physics Letters, 544 (2012) 70-72,
 by A. Chakradhar, J. Shan, M.R. Komarneni, M. Lu, U. Burghaus
- 106 *Catalytic decomposition of thiophene by WS₂ nanotubes coated with Co nanoparticles*,
Materials Research Bulletin, 47 (2012), 1653-1660
 by Y. Tsverin, R. Popovitz-Biro, Y. Feldman, R. Tenne, M. Komarneni, Z. Yu,
 A. Chakradhar, A. Sand, U. Burghaus
- 105 *Adsorption dynamics of CO on silica supported CuOx clusters –
 utilizing electron beam lithography to study methanol synthesis model systems*,
Journal of Physical Chemistry C, 116 (2012) 5792–5801,
 by M. Komarneni, J. Shan, A. Chakradhar, E. Kadossov, S. Cabrini, U. Burghaus
 ►Impact factor 4.8, that's as high as it gets for a Pchem journal, the community is small
- 2011 (6)**
- 104 *Adsorption of water on a hydrophobic surface - the case of antimony(111)*,
Chem. Phys. Lett., 517 (2011) 46-50,
 by J. Shan, A. Chakradhar, Z. Yu, U. Burghaus
- 103 *Adsorption dynamics of CO on copper and gold clusters supported on silica - how special
 is nanogold?*,
Chem. Phys. Lett., 517 (2011) 59-61,

- by J. Shan, K. Komarneni, U. Burghaus
 102 *Utilizing electron beam lithography for studying methanol synthesis model systems – the case of Cu, CuO_x, and Au nano clusters*,
 Preprints of Symposia – **American Chemical Society, Division of Fuel Chemistry**, 57 (2012) 712
 by J. Shan, A. Chakradhar, M. Komarneni, E. Kadossov, J. Schmidt, U. Burghaus, D. Rosenmann, L.E. Ocola, S. Dhuey, S. Cabrini
 101 *Adsorption dynamics of CO on silica-supported Cu clusters – a molecular beam scattering study*,
Journal of Physical Chemistry C, 115 (2011) 16590-16597,
 M. Komarneni, J. Shan, and U. Burghaus
 100 *Adsorption and dissociation kinetics of alkanes on CaO(100)*,
Surface Science 605 (2011) 1534-1540,
 by A. Chakradhar, Y. Liu, J. Schmidt, E. Kadossov, and U. Burghaus
 99 *Adsorption Kinetics of Small Molecules on Selenium Foil*,
Surface Science 605 (2011) 898-902,
 by A. Chakradhar, Z. Yu, A. Ugrinov, U. Burghaus
2010 (7)
 98 *Site specific surface chemistry on nanotubes*,
Israel Journal of Chemistry, (invited & peer reviewed), 50 (2010) 449–452,
 by U. Burghaus, A. Zak, and R. Rosentsveig
97 *Preparation and Characterization of Nanomaterials for Sustainable Energy Production*
ACS Nano 4 (2010) 5517-5526 (invited)
 by Chang-jun Liu, Uwe Burghaus, Flemming Besenbacher and Zhong Lin Wang
 (Tianjin University, China; NDSU, USA; iNANO, Denmark; Georgia Tech, USA)
 ▶ 63 citations in Elsevier journals (Jan 2015); 71 (June 2015, SciFinder)
 ▶ 88 citations (2016) in SciFinder
 96 *Bond activation in thiophene and catalyst poisoning – nanosize Mo clusters supported on silica for desulfurization catalysis*,
 ACS proceedings division of fuel chemistry, Boston,
Am. Chem. Soc., Div. Fuel Chem. 55 (2010) 594
 by E. Kadossov, M. Komarneni, J. Justin, U. Burghaus
 95 *Effect of carbon nanotubes crystal structure on adsorption kinetics of small molecules – an experimental study utilizing ultra-high vacuum thermal analysis techniques*,
 conference proceedings, invited, 38th conference of the North American Thermal Analysis (NATAS) Society, Philadelphia, 2010, published by Springer publisher in Journal of
Thermal Analysis and Calorimetry 106 (2011) 123-128,
 by Uwe Burghaus
 94 *Adsorption of thiophene on silica supported Mo clusters*,
Surface Science 604 (2010) 1221-1229
 by M. Komarneni, E. Kadossov, J. Justin, M. Lu, U. Burghaus
 93 *Adsorption kinetics and dynamics of CO on silica supported Au nanoclusters-utilizing physical vapor-deposition and electron beam lithography*
Journal of Molecular Catalysis A: Chemical 321 (2010) 101-109
 by E. Kadossov, S. Cabrini, U. Burghaus
 92 *Adsorption dynamics of CO on silica supported gold clusters – cluster size effects in molecular beam scattering experiments*,

Catalysis Letters 134 (2010) 228.

by E. Kadossov, U. Burghaus

2009 (10)

- 91 *Gas-surface interactions with nanocatalysts: particle size effects in the adsorption dynamics of CO on supported gold clusters*,
Chemical Physics Letters 483 (2009) 250-253,
by E.B. Kadossov, J. Justin, M. Lu, D. Rosenmann, L. Ocola, S. Cabrini, and U. Burghaus
► 6 citations (2017) in Scopus (covers only Elsevier journals)
- 90 *Adsorption and reaction kinetics of small organic molecules on WS₂ nanotubes: an ultra-high vacuum study*,
Chemical Physics Letters 479 (2009) 109-112,
by M. Komarneni, A. Sand, P. Nevin, A. Zak, U. Burghaus
- 89** *Surface science perspective of carbon dioxide chemistry – adsorption kinetics and dynamics of CO₂ on selected surfaces*,
Catalysis Today 148 (2009) 212-220,
Invited (but peer reviewed), ICCDU-X (10th international conference on CO₂ utilization)
by U. Burghaus
► 20 citations (2016) in SciFinder
- 88 *Multi-site Kinetic Monte Carlo Simulations of Thermal Desorption Spectroscopy Data*,
Surface Science 603 (2009) 2494-2501,
by E. Kadossov and U. Burghaus
- 87 *Possible effect of carbon nanotube diameter on gas-surface interactions – the case of benzene, water, and n-pentane adsorption on SWCNTs*,
Chemical Physics Letters 476 (2009) 227-231,
by M. Komarneni, A. Sand, J. Goering, U. Burghaus, M. Lu, L. Veca, Ya-Ping Sun
- 86 *Interaction of combustion gases with CaO(100) surface: adsorption kinetics and dynamics*,
ACS conference proceedings, Salt Lake City,
Am. Chem. Soc., Div. Fuel Chem. 54 (2009) 268
by E. Kadossove, M. Hoffmann, U. Burghaus
- 85 *Adsorption kinetics of methanol in carbon nanotubes revisited – solvent effects and pitfalls in ultra-high vacuum surface science experiments*,
Chemical Physics Letters 473 (2009) 131-134
by M. Komarneni, A. Sand, M. Lu, U. Burghaus
► Citations 3 (Nov 2009, self citations excluded)
- 84 *Adsorption kinetics of small organic molecules on thick and thinner layers of carbon nanotubes*,
Chemical Physics Letters 470 (2009) 300-303
by M. Komarneni, A. Sand, M. Lu, and U. Burghaus
- 83 *Adsorption of thiophene on inorganics MoS₂ fullerene-like nanoparticles*,
Catalysis Letters 129 (2009) 66-70
by M. Komarneni A. Sand, u. Burghaus
- 82 *Gas-carbon nanotubes interactions: a review of surface science studies on CNTs*,
Book chapter in "Carbon nanotubes – Research Trends",
2009, Nova Science (New York), ISBN 978-1-60692-236-1
50 printed pages, 380 references
by U. Burghaus
(non peer-refereed)

2008 (11)

- 81 *Adsorption kinetics and dynamics of CO and CO₂ on FeO_x nanoclusters: DFT and molecular beam scattering*,
ACS conference proceedings, division of fuel chemistry, (Philadelphia-“Fuel Research and Development in the 21st century”), ISSN 1521-4648
53 (2008) 855-856,
by. E. Kadossov (postdoc at UND at that time), U. Burghaus (NDSU),
M.R. Hoffmann (UND),
funding DoE-EPSCoR state grant
- 80 *Adsorption of water on JSC-1A (simulated moon dust samples) – a surface science study*,
Surface and Interface Analysis, 40 (2008) 1423-1429
DOI 10.1002/sia.2918 (published already online)
Internal NASA report NASA/TM-2008-215279
by J. Goering, Shweta Sah, U. Burghaus (NDSU), K.W. Street, Jr. (NASA)
funding NASA-EPSCoR
- 79 *Reactive and non-reactive interactions of thiophene with WS₂ fullerene-like nanoparticles: an ultra-high vacuum surface science study*,
Catalysis Letters 125 (2008) 236-242,
DOI 10.1007/s10562-008-9565-7
by J. Goering, U. Burghaus, B.W. Arey, O. Eidelman, A. Zak, R. Tenne
funding DoE
- 78** *Unexpected bond activation of small organic molecules on a metal oxide – butane/CaO(100)*,
Chemical Communications (2008) 4073-4075
by E.B. Kadossov, U. Burghaus
DOI:10.1039/b804472d
► [Impact factor 5.0, rejection rate 70%](#)
funding DoE, NSF-CAREER
- 77 *Adsorption kinetics of alcohols on single wall carbon nanotubes – an ultra-high vacuum surface science study*,
Journal of Physical Chemistry C 112 (2008) 10114-10124,
by J. Goering, E. Kadossov, U. Burghaus
funding NSF-EPSCoR seed, NSF-CAREER
► Citations: 10 (in Elsevier journals/Scopus system)
- 76 *Adsorption dynamics and kinetics of CO, NO, and CO₂ on reduced CaO(100) surfaces*,
Journal of Physical Chemistry C 112 (2008) 7390-7400,
by. E. Kadossov, U. Burghaus
funding DoE-EPSCoR state grant
► [26 citations \(2016\) in SciFinder](#)
- 75 *Adsorption kinetics and dynamics of small organic molecules on a silica wafer: Butane, pentane, nonane, thiophene, and methanol adsorption on SiO₂/Si(111)*,
Applied Surface Science 254 (2008) 5271-5275,
by S. Funk, J. Goering, U. Burghaus
funding DoE-EPSCoR state grant
- 74 *Adsorption dynamics and kinetics of CO₂ on Fe/FeO_x nanoclusters supported on HOPG*,
Surface and Interface Analysis 40 (2008) 893-898,

- by E. Kadossov, U. Burghaus
funding DoE-EPSCoR state grant
- 73 *Molecular beam scattering of CO on iron oxide clusters supported on graphite (HOPG)*,
Surface Science 602 (2008) 811-818,
by E. Kadossov, J. Goering, U. Burghaus
funding DoE-EPSCoR state grant
- 72 *CO adsorption on FeO_x nano-clusters supported on HOPG – effect of oxide formation on catalytic activity*,
Catalysis Letters 120 (2008) 179-183,
by E. Kadossov, S. Funk, U. Burghaus
funding DoE-EPSCoR state grant
- 71 *Reactivity screening of anatase TiO₂ nanotube arrays and antase thin films: a surface chemistry point of view*,
by S. Funk, B. Hokkanen, T. Nurkic, J. Goering, E. Kadossov, U. Burghaus (NDSU)
A. Ghicov, P. Schmuki (Nuernberg-Erlangen University)
Z.Q. Yu, S. Thevuthasan, L.V. Saraf (PNNL)
In "Nanoparticles: Synthesis, Stabilization, Passivation and Functionalization", Eds.,
R. Nagarajan and T. A. Hatton,
2007 **ACS Symposium Series** 996, American Chemical Society, Washington DC.,
Chapter 11 (page 139-151), Printed by Oxford University press.
ISBN 978-0-8412-6969-9
- 2007 (11)**
- 70 *Adsorption kinetics of thiophene on single-walled carbon nanotubes (CNTs)*,
Chemical Physics Letters 447 (2007) 121-126,
by J. Goering, U. Burghaus
funding DoE-EPSCoR state grant
- 69 *Adsorption kinetics of alkanes on TiO₂ nanotubes - structure activity relationship*,
Surface Science 601 (2007) 4620-4628,
by B. Hokkanen, S. Funk, U. Burghaus, (NDSU) A. Ghicov, P. Schmuki (Erlangen)
funding DoE-EPSCoR state grant
- 68 *Molecular beam scattering of linear and branched butane on graphite (HOPG)*,
Surface Science 601 (2007) 3421-3425,
by E. Kadossov, J. Goering, and U. Burghaus
funding DoE-EPSCoR state grant
- 67 *CO oxidation on anatase TiO₂ nanotubes array and the effect of defects*,
Catalysis Letters 118 (2007) 118-122,
by S. Funk, U. Burghaus
funding DoE-EPSCoR state grant
- 66** *Methanol adsorption in carbon nanotubes*,
Chemical Physics Letters 442 (2007) 344-347,
by U. Burghaus,^{1*} D. Bye,² K. Cosert,² J. Goering,¹ A. Guerard,² E. Kadossov,¹
E. Lee,¹ Y. Madoyama,² N. Richter,¹ E. Schaefer,² J. Smith,² D. Ulness,²
and B. Wymore¹ (¹NDSU, ²Concordia college MN)
► NDSU Physical Chemistry Laboratory class paper / **teaching outreach**
funding NSF EPSCoR seed
► Citations 2

- 65 *Adsorption of iso-/n-butane on an anatase thin film: a molecular beam scattering and TDS study*,
Catalysis Letters 116 (2007) 9-14
 by J. Goering,¹ E. Kadossov,¹ U. Burghaus,^{1*} Z.Q. Yu,² S. Thevuthasan,²
²L.V. Saraf,² (¹NDSU ²PNNL)
 funding DoE-EPSCoR state grant
- 64 *Adsorption dynamics of alkanes on single wall carbon nanotubes: a molecular beam scattering study*,
Journal of Physical Chemistry C 111 (2007) 8043-8049,
 by S. Funk, U. Burghaus, (NDSU) Brian White, Stephen O'Brien, and Nicholas J. Turro
 (Columbia University, New York)
 funding NSF EPSCoR seed
- 63** *Unexpected adsorption of oxygen on TiO₂ nanotube arrays - influence of crystal structure*,
Nano Letters 7 (2007) 1091-1094
 by S. Funk, B. Hokkanen, U. Burghaus (NDSU), A. Ghicov, and P. Schmuki (Erlangen-Nuernberg, University, Germany)
 funding DoE-EPSCoR state grant
 ► Impact factor: 9.8 (2007), which is above *Angewandte*, *JACS*, and *PRL*.
 ► Citations: 25 (excluding self citations, Nov 2009)
 ► 66 citations (2016) in SciFinder
- 62 *CO₂ adsorption on Cr(110) and Cr₂O₃(0001)/Cr(110)*,
Applied Surface Science 253 (2007) 7108-7114,
 by S. Funk, T. Nurkic, B. Hokkanen, and U. Burghaus
 funding NASA-EPSCoR
 ► Citations: 1
- 61 *Reactivity screening of silica*,
Applied Surface Science 253 (2007) 4860-4865,
 by S. Funk, T. Nurkic, and U. Burghaus
 funding ACS-PRF / DoE-EPSCoR state grant
- 60 *Effect of surface defects in heterogeneous catalysis, (review)*,
Trend in Physical Chemistry 11 (2006) 1-19 (ISSN 0972-4435)
 by U. Burghaus
 funding DoE-EPSCoR state grant
 non peer- reviewed
- 2006 (8)**
- 59 *Adsorption of CO₂ on oxidized, defected, hydrogen, and oxygen covered rutile (1x1)-TiO₂(110)*,
PCCP - Physical Chemistry Chemical Physics 8 (2006) 4805-4813
 by S. Funk and U. Burghaus
 funding ACS-PRF
 ► Citations: 2
- 58 *Adsorption of iso-butane on ZnO(0001)-Zn*,
Surface Science 600 (2006) 4855-4859,
 by J. Wang, B. Hokkanen, and U. Burghaus
 funding ACS-PRF
- 57 *Effect of oxygen vacancy sites on CO₂ adsorption dynamics: the case of rutile*

- (1x1)-TiO₂(110),
Chemical Physics Letters 422 (2006) 461-465,
 by S. Funk, B. Hokkanen, E. Johnson, and U. Burghaus
 funding ACS-PRF
 ► Citations: 1
- 56 *CO₂ adsorption on the bimetallic Zn-on-Cu(110) system*,
Surface Science 600 (2006) 1870-1876,
 by S. Funk, B. Hokkanen, U. Burghaus, (NDSU)
 and G. Bozzolo, J.E. Garcés, (NASA)
 funding NASA/EPSCoR
 ► Citations: 1
- 55 *A Practical Guide to Monte Carlo Simulations and Classical Molecular Dynamics Simulations: An Example Book*,
 Nova Science Publishers NY, (www.novapublishers.com), **textbook**,
 ISBN 1-59454-531-6,
 by U. Burghaus (USA), J. Stephan (Germany), L. Vattuone (Italy),
 J.M. Rogowska (Poland),
 (non peer-refereed)
- 54 *Adsorption dynamics of CO₂ on Cu(110): a molecular beam study*,
Surface Science 600 (2006) 583-590,
 by S. Funk, B. Hokkanen, J. Wang, U. Burghaus, (NDSU)
 and G. Bozzolo, J.E. Garcés, (NASA)
 funding NASA/EPSCoR
 ► Citations 3 (Nov 2009, self citations excluded)
- 53 *Adsorption of carbon dioxide and CO on copper nanoparticle-based ZnO methanol synthesis model catalysts*,
 ACS meeting in Atlanta 2006,
Conference proceedings (ACS): Fuel Chemistry, Volume 50, Number 2,
 by S. Funk, B. Hokkanen, E. Johnson, J. Wang, and U. Burghaus,
 funding ACS-PRF
 (non peer-refereed).
- 52 *Atomistic modeling of Zn deposition on the low index faces of Cu*,
Surface Science 600 (2006) 195-204,
 by S. Funk (NDSU), G. Bozzolo (NASA), J.E. Garcés (NASA), U. Burghaus (NDSU),
 funding NASA/EPSCoR
 ► Citations: 1
- 2005 (7)**
- 51 *Adsorption dynamics of CO₂ on copper-precovered ZnO(0001)-Zn: a molecular-beam scattering and thermal-desorption spectroscopy study*,
Journal of Chemical Physics 123 (2005) 204710-(11 pages),
 by J. Wang, S. Funk, U. Burghaus,
 funding ACS-PRF
- 50 *Adsorption of CO on the copper-precovered ZnO(0001) surface: A molecular-beam scattering study*,
Journal of Chemical Physics 123 (2005) 184716-(12 pages),
 by J. Wang, U. Burghaus,

- funding ACS-PRF
 ► Citations 3 (Nov 2009, self citations excluded)
- 49 *Indications for Metal Support Interactions: The Case of CO₂ Adsorption on Cu/ZnO(0001),*
Catalysis Letters 103 (2005) 219-223,
 by J. Wang, S. Funk, U. Burghaus,
 funding ACS-PRF
 ► Citations: 3
- 48 *Particle size effects in the adsorption dynamics of CO: the Structure-Activity Relationship*
in the case of Cu/Zn-ZnO,
Chemical Physics Letters 410 (2005) 131-135,
 by J. Wang, E. Johnson, U. Burghaus,
 funding ACS-PRF
 ► Citations: 1
- 47 *Adsorption of CO₂ on pristine Zn-ZnO(0001) and defected Zn-ZnO(0001): A thermal*
desorption spectroscopy study,
Surface Science 577 (2005) 158-166,
 by J. Wang, B. Hokkanen, U. Burghaus,
 funding ACS-PRF
 ► Citations 2 (Nov 2009, self citations excluded)
- 46 *Structure-activity relationship: The case of CO₂ adsorption on H/Zn-ZnO(0001),*
Chemical Physics Letters 403 (2005) 42-46,
 by J. Wang, U. Burghaus,
 funding ACS-PRF
 ► Citations: 1
- 45 *Adsorption dynamics of CO₂ on Zn-ZnO: A molecular beam study,*
Journal of Chemical Physics 122 (2005) 044705-(12 pages),
 by J. Wang, U. Burghaus,
 funding ACS-PRF
 ► Citations: 1
- 2004 (1)** (Appointment at NDSU since August 15th 2003)
- 44 *Adsorption dynamics of CO₂ on hydrogen precovered Zn-ZnO: A molecular beam study,*
Surface Review and Letters 11 (2004) 1-9,
 by J. Wang, U. Burghaus,
 (non peer-refereed),
 funding ACS-PRF
 ► Citations: 1
- PUBLICATIONS PRIOR TO NDSU** (diploma thesis (= master), PhD, postdoctoral work,
 habilitation (= German tenure)):
- 2004 (1)**
- 43 *The adsorption of hydrogen on the rutile TiO₂(110) surface,*
PCCP - Phys. Chem. Chem. Phys. 6 (2004) 4203,
 by M. Kunat, U. Burghaus, and Ch. Wöll.
- 2003 (8)**
- 42 *The interaction of water with the oxygen-terminated, polar surface of ZnO,*
J. Phys. Chem. B 107 (2003) 14350,
 By M. Kunat, St. Gil Girol, U. Burghaus, Ch. Woell.

- 41 *Adsorption of hydrogen on O-ZnO*,
PCCP - Phys. Chem. Chem. Phys. 5 (2003) 4962,
by M. Kunat, U. Burghaus, Ch. Wöll.
- 40 *Adsorption of CO on rutile (1x1)-TiO₂(110): a molecular beam study*,
Surface Science 544 (2003) 170,
by M. Kunat, U. Burghaus*.
► Citations: 1
- 39 *Low energy vibrational dynamics of Xe on copper*,
Physical Review B 68 (2003) 075403,
by Ch. Boas, M. Kunat, U. Burghaus, B. Gumhalter, Ch. Wöll.
- 38 *Coadsorption of hydrogen and CO on Zn-ZnO: a molecular beam study*,
Journal of Vacuum Science and Technology A21 (2003) 1322,
by M. Kunat, U. Burghaus*.
- 37 *Kinetic Monte Carlo Simulation of adsorption probabilities: the auto-catalytic adsorption phenomenon*,
Journal of Vacuum Science and Technology A21 (2003) 1284,
by J. Stephan, U. Burghaus*.
- 36** *Stabilization of polar ZnO-surfaces: Validating microscopic models by using CO as a probe molecule*,
Physical Review Letters 90 (2003) 106102,
by V. Staemmler, K. Fink, B. Meyer, D. Marx, M. Kunat, S. Gil Girol,
U. Burghaus, Ch. Wöll.
► Citations: 57 (Nov 2009, excluding self citations)
- 35 *CO oxidation on Ag(110): surface reconstruction contra sub-surface oxygen*,
Surface Review and Letters 10 (2003) 39,
by U. Burghaus*, A. Böttcher, and H. Conrad.
- 34 *Monte Carlo Simulations of adsorption probabilities: the case of CO/disordered-Cu(110) and CO/O-Ir(110)*,
Surface Review and Letters 10 (2003) 7,
by U. Burghaus.
(non peer-refereed)
- 2002 (2)**
- 33** *Stability of polar surfaces of ZnO: a reinvestigation by He atom scattering*,
Rapid Communication Physical Review B66 (2002) 081402,
by M. Kunat, St. Gil-Girol, Th. Becker, U. Burghaus, Ch. Wöll.
- 32 *Effect of defects and preadsorbates on adsorption probabilities: a Monte Carlo Simulation point of view*,
Surface Science 507-510 (2002) 736,
by J. Stephan, U. Burghaus*.
- 2001 (6)**
- 31 *Adsorption dynamics in the case of pre-adsorbates: measuring methods and precursor models*,
Research Trends in Physical Chemistry (review) 8 (2001) 21,
by U. Burghaus.
(non peer-refereed)
- 30 *Monte Carlo Simulation of the adsorbate-assisted adsorption in the case of CO/ZnO*,
Surface Review and Letters 8 (2001) 353,

- by U. Burghaus.
(non peer-refereed)
- 29 *Oxygen adsorption on a defected and nano-structured Ag(001) surface*,
Journal of Chemical Physics 115 (2001) 3346,
by L. Vattuone, U. Burghaus, L. Savio, D. Zampa, M. Rocca, F. Buatier de Mongeot, G. Costantini, C. Boragno, and U. Valbusa.
 - 28 *Interaction of hydrogen with metal oxides: the case of the polar ZnO(0001)-surface*,
Surface Science 486 (2001) L502, Erratum 511 (2002) 463,
by Th. Becker, St. Hövel, M. Kunat, Ch. Boas, U. Burghaus, and Ch. Wöll.
▶ Citations: 18
 - 27 *Comment on "Effect of the structural anisotropy and lateral strain on the surface phonons of monolayer xenon on Cu(110)"*,
Physical Review B 64 (2001) 037401,
by Ch. Boas, Th. Becker, M. Kunat, U. Burghaus, and Ch. Wöll.
 - 26 *Adsorption dynamics of CO on Cu(110): a molecular beam study*,
Surface Science 474 (2001) 114,
by M. Kunat, Ch. Boas, Th. Becker, U. Burghaus*, and Ch. Wöll.
 - 2000 (9)
 - 25 *Adsorbate-assisted adsorption: a Monte Carlo simulation*,
Conference proceedings 9th Int.Symp.Hetero.Catal., Varna (2000),
by U. Burghaus*, L. Vattuone, and I. Kopal.
(non peer-refereed)
 - 24 *Adsorption dynamics of CO on the polar surfaces of ZnO*,
Journal of Chemical Physics 113 (2000) 6334,
by Th. Becker, M. Kunat, Ch. Boas, U. Burghaus*, and Ch. Wöll.
 - 23 *Low energy vibrational dynamics of alkanethiols adsorbed on copper*,
Surface Science 462 (2000) 135,
by S. Vollmer, P. Fouquet, G. Witte, Ch. Boas, M. Kunat,
U. Burghaus, and Ch. Wöll.
 - 22 *Adsorption probabilities of CO on O-ZnO: a molecular beam study*,
Journal of Vacuum Science and Technology A18 (2000) 1089,
by Th. Becker, Ch. Boas, U. Burghaus*, and Ch. Wöll.
 - 21 *Tuning surface reactivity by in situ surface nanostructuring*,
Journal of Chemical Physics 112 (2000) 1089,
by G. Costantini, F. Buatier de Mongeot, S. Rusponi, C. Boragno, U. Valbusa,
L. Vattuone, U. Burghaus, L. Savio, and M. Rocca.
 - 20 *Transient CO₂ formation on Pd(111) and Pd(110)*,
Surface Science 454-456 (2000) 326,
by U. Burghaus*, I.Z. Jones, and M. Bowker.
 - 19 *Phase Transition of dissociatively adsorbed oxygen on Ag(001)*,
Physical Review B 61 (2000) 213,
by M. Rocca, L. Savio, L. Vattuone, U. Burghaus, V. Palomba, N. Novelli,
F. Buatier de Mongeot, U. Valbusa, R. Gunnella, G. Comelli, A. Baraldi, S. Lizzit,
G. Paolucci.
▶ Citations 62 (Nov 2009, self citations excluded)
 - 18 *Adsorption probabilities of CO on a metal oxide surface: the case of O-ZnO and the influence of defects*,

- Physical Review B** 61 (2000) 4538,
by Th. Becker, Ch. Boas, U. Burghaus*, and Ch. Wöll.
- 17 *Chemisorption of Isobutane and Neopentane on Ir(110)*,
Surface Science 446 (2000) 46,
by J. Ding, U. Burghaus, and W.H. Weinberg.
- 1999 (1)**
- 16 *Carbon-13 Kinetic Isotope Effects in CO Oxidation by Ag*,
Langmuir 15 (1999) 5825,
by I. Kobal, U. Burghaus, M. Senegacnik, and N. Ogrinc.
- 1998 (5)**
- 15 *Carbon-13 Kinetic Isotope Effects in the Catalytic Oxidation of CO over Ag*,
Journal of Physical Chemistry B 102 (1998) 6787,
by I. Kobal, U. Burghaus, M. Senegacnik, and N. Ogrinc.
- 14 *Breakdown of normal energy scaling at high impact energy for O₂ on Ag(001)*,
Surface Science Letters 408 (1998) L693,
by L. Vattuone, U. Burghaus, U. Valbusa, and M. Rocca.
- 13 *Carbon monoxide oxidation on Ir(110)*,
Journal of Vacuum Science and Technology A 16 (1998) 1010,
by U. Burghaus*, J. Ding, and W.H. Weinberg.
- 12 *Self-accelerating kinetics of CO₂ formation on Ir(110)*,
Surface Science 396 (1998) 273,
by U. Burghaus, J. Ding, and W.H. Weinberg.
- 11 *Collision induced desorption and dissociation of O₂ chemisorbed on Ag(001)*,
Journal of Chemical Physics 109 (1998) 2490,
by L. Vattuone, P. Gambardella, U. Burghaus, F. Cemic, A. Cupolillo,
U. Valbusa, and M. Rocca.
- 1997 (3)**
- 10 *Effect of preadsorbed oxygen on the adsorption of CO on Ir(110)*,
Surface Science Letters 384 (1997) L869,
by U. Burghaus*, J. Ding, and W.H. Weinberg.
- 9 *HREELS study of CO oxidation on Ag(100) by O₂ or O*,
Surface Science 374 (1997) 1,
by U. Burghaus, L. Vattuone, P. Gambardella, and M. Rocca.
- 8 *CO oxidation by atomically adsorbed oxygen on Ag(110) in the temperature range 100 - 300 K*,
Surface Science 370 (1997) 17,
by U. Burghaus, H. Conrad.
- 1996 (3)**
- 7 *Evidence for the oxidation of CO by molecular oxygen adsorbed on Ag(110)*,
Surface Science 364 (1996) 109,
by U. Burghaus, H. Conrad.
- 6 *The influence of surface reconstructions on the CO oxidation reaction rate for the O/Ag(110) surface*,
Surface Science 352-354 (1996) 201,
by U. Burghaus, H. Conrad.
- 5 *Oxidation of CO by molecular oxygen adsorbed on Ag(110)*,

Surface Science 352-354 (1996) 253,
by U. Burghaus, H. Conrad.

1995 (2)

- 4 *Evidence for two kinetically distinct atomic oxygen species on Ag(110): A molecular beam study of the CO oxidation reaction,*
Surface Science Letters 338 (1995) L869,
by U. Burghaus, H. Conrad.
- 3 *A Molecular Beam Relaxation Spectroscopy Study of CO Adsorption on Ag(110) and Pt(111),*
Surface Science 331-333 (1995) 116,
by U. Burghaus, H. Conrad.

1990 (2)

- 2 *The ionic-to-neutral transition in alkali metal adsorption: potassium on Ag(100),*
Surface Science Letters 234 (1990) L271,
by H.B. Nielsen, U. Burghaus, E. Matthias.
► Citations 19 (Nov 2009, self citations excluded)
- 1 *Electronic structure of K on Ag(100),*
Vacuum 41 (1990) 558,
by H.B. Nielsen, U. Burghaus, E. Matthias.

ACS – American Chemical Society
AVS – American Vacuum Society
ECOSS – European Conference on Surface Science
Presenting author underlined.

INVITED INTERNATIONAL CONFERENCE TALKS

- 2013 “Nanocatalysis – identifying active sites in heterogeneous catalysis”, **ICSS**, International Conference on Small Science, **Las Vegas** (NV), 2013
- 2010 “Effect of carbon nanotubes crystal structure on adsorption kinetics of small molecules – an experimental study utilizing ultra-high vacuum thermal analysis techniques”, North American Thermal Analysis Society, **Pittsburg**, by Uwe Burghaus (Session organizer Eric U. Borguet, Temple University)
- 2009 “Adsorption kinetics and dynamics of CO₂ on metal and metal oxide single crystals – an ultra-high vacuum surface chemistry study”, U. Burghaus, 10th international conference on CO₂ utilization, **ICCDU-X, Tianjin**, China (organizer Chang-jun Liu, Tinjin, China).
- 2007 “Catalytic properties of anatase TiO₂ nanotube arrays and anatase thin films”, U. Burghaus, EMSL (Pacific Northwest National Laboratories) user research symposium as part of the 62nd NORM Meeting of the **ACS** in **Boise**, Idaho, June 17-20, 2007 (organizer Nancy Foster-Mills, PNNL)
- 2006 “Structure-activity relationship: The effect of surface defects on adsorption dynamics, a molecular beam scattering study”, U. Burghaus, **ACS** symposium in **San Francisco**, CA, September 10-14, 2006, (Fundamentals of Metal Oxide Catalysis – Surface Structure and Reactivity, organizer: Z. Dohnalek, J.M. White, PNNL)

INVITED DEPARTMENT / LOCAL SEMINAR TALKS

- 2017 *Nanoscience on the Prairie - Graphene and Other Flatlands*, 2017 Great Lakes Regional Meeting, Fargo, ND, June 27-30, 2017, Uwe Burghaus (invited by Dmitri Kilin)
- 2015 Physics Department at the University of North Dakota, UND (invited by Nuri Oncel)
- 2012 Chemistry Department at the University of South Dakota (invited by Dmitri Kilin)
- 2009 Department of Civil Engineering, NDSU (invited by Kalpana Katti)
- 2008 Department of Physics, NDSU (invited by Thomas Ihle)
- 2007 Department of Chemistry, Iowa State University (invited by P. Thiel)
- 2005 Department of Chemistry, Concordia College, Moorhead, MN (invited by D. Ulness)
- 2004 Department of Physics, NDSU (invited by A. Denton)

CHAired CONFERENCE SESSIONS

- 2012 Session co-chair of the “Nanotechnology for a Sustainable Energy Economy” session of the 243rd ACS National Meeting, March 2012, San Diego, CA
- 2010 Session chair of the “Nanotech for Sustainable Energy and Fuels” session of the 240th ACS National Meeting, August 22-26, 2010, Boston, MA

ORAL PRESENTATIONS AT INTERNATIONAL CONFERENCES

- 2015 “A kinetics study on the adsorption of polar (water) and non-polar (benzene) molecules on CVD graphene”, **AVS** meeting in Palo Alto, by Nilushni Sivapragasam, Ashish Chakradhar, Mindika Tilan Nayakasinghe, & Uwe Burghaus
- 2012 “Synthesis and catalytic activity of WS₂ nanotube supported cobalt and nickel catalysts towards thiophene hydrodesulfurization”, **AVS** meeting in Orlando, by M. Komarneni, Z. Yu, A. Chakradhar, U. Burghaus, Y. Tsverin, R. Popovitz-Biro, Y. Feldman, R. Tenne
- 2012 “The adsorption of CO and CO₂ on silica supported CuO_x clusters”, **AVS** meeting in Orlando, by J. Shan, A. Chakradhar, M. Komarneni, and U. Burghaus

- 2012 “Adsorption of Water on a Hydrophobic Sb(111) Surface” AVS meeting in Orlando, by A. Chakradhar, J. Shan, Z. Yu, U. Burghaus
- 2012 “Utilizing electron beam lithography for studying methanol synthesis model systems – the case of Cu, CuO_x, and Au nano clusters”, ACS meeting in San Diego, by J. Shan, A. Chakradhar, M. Komarneni, E. Kadossov, J. Schmidt, U. Burghaus, D. Rosenmann, L.E. Ocola, S. Dhuey, S. Cabrini
- 2011 “Bond Activation of Alkanes on CaO(100)”, AVS, by A. Chakradhar, Y. Liu, U. Burghaus
- 2011 “Molecular beam scattering of CO and CO₂ on CuO_x nanoclusters supported on silica fabricated by electron beam lithography”, AVS, BY M. Komarneni, E. Kadossov, S. Cabrini, U. Burghaus
- 2009 “Interactions of combustion gases with CaO(100) surfaces: adsorption kinetics and dynamics”, ACS meeting in Salt Lake City, by E. Kadossov, M. Hoffmann, U. Burghaus, submitted
- 2008 “Adsorption of Water on JSC-1a Lunar Simulant Samples”, Joint Meeting of The Geological Society of America, Soil Science Society of America, American Society of Agronomy, Crop Science Society of America, Gulf Coast Association of Geological Societies with the Gulf Coast Section of SEPM, by J. Goering, S. Sah, U. Burghaus (NDSU), K.W. Street (NASA)
- 2008 “Adsorption kinetics and dynamics of CO and CO₂ on FeO_x nanoclusters: DFT and molecular beam scattering”, by E. Kadossov, U. Burghaus, M.R. Hoffmann, ACS meeting in Philadelphia (“Fuel Research and Development in the 21st century”)
- 2007 “Reactivity of TiO₂ nanotubes towards oxygen and alkane adsorption – structure activity relationship”, by S. Funk, B. Hokkanen, T. Nurkic, U. Burghaus, A. Ghicov, P. Schmuki, L. Saraf, ACS meeting in Chicago
- 2006 “CO₂ and CO adsorption on ZnO(0001) and Cu/ZnO(0001)”, by S. Funk, B. Hokkanen, E. Johnson, J. Wang, and U. Burghaus, ACS meeting in Atlanta
- 2005 “Structure-Activity Relationship: the case of CO and CO₂ adsorption on ZnO(0001), H/ZnO(0001), Cu/ZnO(0001)”, AVS meeting in Boston, by J. Wang, S. Funk, B. Hokkanen, E. Johnson, and U. Burghaus
- 2003 “Adsorption of CO on Rutile (1x1)-TiO₂(110): A Molecular Beam Study”, AVS meeting in Baltimore, Maryland, by M. Kunat, U. Burghaus

ORAL PRESENTATIONS AT LOCAL CONFERENCES

- 2016 “ADSORPTION OF WATER ON ULTRATHIN CRYSTALLINE SILICA FILMS”, ND Academy of Science, Mindika T. Nayakasinghe, Nilushni Sivapragasam, Uwe Burghaus
- 2016 “Short alkane adsorption on Ru (0001) and graphene/Ru (0001)”, ND Academy of Science, Nilushni Sivapragasam, Ashish Chakradhar, Tilan Abeyratna, & Uwe Burghaus
- 2015 “Small molecules interaction on graphene: a kinetic approach”, ND Academy of Science, by Nilushni Sivapragasam, Ashish Chakradhar, Tilan Abeyratna, & Uwe Burghaus
- 2015 “SYNTHESIS AND CHARACTERIZATION OF SILICA THIN FILMS”, ND Academy of Science, by Tilan Abeyratna, Ashish Chakradhar, Nilushni Sivapragasam & Uwe Burghaus

- 2009 “Possible effect of carbon nanotube crystal structure on gas-surface interaction: the case of benzene, water, and n-pentane adsorption on SWCNTS”, ND Academy of Science, by M. Komarneni, A. Sand, J. Goering, U. Burghaus
- 2009 “Small is different – how nanoscience can help to develop catalysts for cleaner fuels”, ND Academy of Science, by M. Komarneni, A. Sand, J. Goering, U. Burghaus
- 2007 “TDS and molecular beam scattering studies of CO and CO₂ interaction with FeO_x clusters supported on graphite”, local **AVS** meeting - Applied Surface Analysis, Minneapolis, MN, by E. Kadossov, J. Goering, U. Burghaus
- 2007 “Adsorption dynamics of alkanes on carbon nanotubes: a molecular beam scattering study”, North Dakota Academy of Science, by S. Funk, U. Burghaus
- 2007 “Adsorption kinetics of n-/iso-butane on an anatase TiO₂(001) thin film sample: a surface chemistry study”, North Dakota Academy of Science, by J. Goering, E. Kadossov, U. Burghaus
- 2005 “Structure-Activity Relationship: the case of CO₂/ZnO(0001) and CO/Cu-ZnO(0001)”, North Dakota Academy of Science, by J. Wang, B. Hokkanen, E. Johnson, and U. Burghaus
- 2005 “Indications for strong metal support interactions: The case of CO₂ adsorption on Cu nano particles supported on ZnO(0001)”, North Dakota Academy of Science, by J. Wang, S. Funk, and U. Burghaus

POSTER SESSIONS ATTENDED AT INTERNATIONAL MEETINGS

- 2017 “Support effects of graphene on n-pentane adsorption: an ultrahigh vacuum (UHV) study”, by Nilushni Sivapragasam, Mindika. T. Nayakasinghe, Ashish Chakradhar, and Uwe Burghaus, NDSU-KU (Kagoshima University, Japan) Joint Symposium on Biotechnology, Nanomaterials and Polymers
- 2015 “Adsorption Kinetics of Small Molecules on Supported-Graphene”, by A. Chakradhar, N. Sivapragasam, N.M.K.G.M. Tilan Abeyrathna, U. Burghaus **Gordon Research Conference** on Surface Science, Ventura (CA), 2015
- 2012 “Preparation of Cu nano clusters with well-defined structural defects by electron beam lithography”, **ACS** meeting in SanDiego, by J. Schmidt, S. Dhuey, S. Cabrini, U. Burghaus
- 2011 “Molecular beam scattering of CO on silica supported cluster systems – the case of Au, Cu, Cu-oxide clusters”, **Gordon Research Conference**, ‘Dynamics’, Newport, RI, by M. Komarneni, J. Shan, U. Burghaus
- 2011 “Molecular beam scattering of small molecules on supported cluster systems – the case of CO/Au-silica and thiophene/Mo-silica”, **Gordon Research Conference** “Chemical Reactions at Surfaces”, in Ventura, CA, by E. Kadossov, M. Komarneni, J. Justin, M. Lu, S. Cabrini, U. Burghaus
- 2010 “Adsorption dynamics of CO on silica-supported Au nanoclusters”, **ACS** meeting, by E. Kadossov, J. Justin; M. Lu, D. Rosenmann, L.E. Ocola, S. Cabrini, U. Burghaus
- 2009 “Reactive and non-reactive interactions of thiophene with WS₂ and MoS₂ fullere-like nanoparticles”, **ACS** meeting in Salt Lake City, by A. Sand, J. Goering, U. Burghaus, B.W. Arey, O. Eidelman, A. Zak, R. Rosentsveig, R. Tenne, submitted
- 2009 “Unexpected effect of CNT exfoliation on adsorption kinetics of small organic molecules – bundles vs. isolated carbon nanotubes”, **ACS** meeting in Salt Lake City, by M. Komarneni, A. Sand, M. Lu, U. Burghaus, submitted

- 2008 “Adsorption kinetics of alcohols on carbon nanotubes”, by J. Goering, M. Komarneni, U. Burghaus, **AVS** meeting in Boston
- 2007 “Molecular beam scattering of alkanes on carbon nanotubes”, by S. Funk, U. Burghaus, B. White, S. O'Brien, N. Turro, **ACS** meeting in Chicago
- 2007 “CO₂ adsorption on Cr₂O₃(0001)/Cr(110)”, by S. Funk, B. Hokkanen, T. Nurkic, U. Burghaus, **ACS** meeting in Chicago
- 2006 “CO₂ adsorption on the bimetallic system Zn-on-Cu(110)”, by S. Funk, B. Hokkanen, U. Burghaus, G. Bozzolo, J.E. Garcés, **ACS** meeting in Atlanta
- 2005 “Structure-Activity Relationship: The Case of CO₂ and Hydrogen Adsorption on Zn-ZnO(0001)”, **ACS** meeting in San Diego, CA
by B. Hokkanen, J. Wang, E. Johnson, and U. Burghaus
- 2004 “Structure-Activity Relationship: The Case of CO₂ Adsorption on Pristine Zn-ZnO(0001) and Defected Zn-ZnO(0001)”, **Gordon Research Conference** “Chemical Reactions at Surfaces” in Ventura, CA, by J. Wang, B. Hokkanen, and U. Burghaus

POSTER SESSIONS ATTENDED AT LOCAL MEETINGS

- 2017 “Adsorption kinetics and dynamics of CO₂ on graphene oxide/Ru(0001)”, 2017 Great Lakes Regional Meeting (GLRM) Fargo (ND), Nilushni Sivapragasam, Mindika.T. Nayakasinghe, and Uwe Burghaus
- 2017 “Adsorption of Benzene on Mo(112)-P(1X3)-O and Mo(112) Supported Crystalline Silica Films”, MINDIKA T NAYAKASINGHE & NILUSHNI SIWAPRAGASM & UWE BURGHAUS, North Dakota State University, **ND EPSCoR** conference
- 2016 “Temperature Programmed Desorption as a Characterization tool for Ultra-thin Silica Films grown on Mo(112)”, **ND EPSCoR** conference, MINDIKA TILAN NAYAKASINGHE, ASHISH CHAKRADHAR, NILUSHNI SIVAPRAGASAM, UWE BURGHAUS
- 2016 “Short chain alkanes (n-butane and n-pentane) adsorption on Ru(0001) and graphene/Ru(0001)”, **ND EPSCoR** conference, NILUSHNI SIVAPRAGASAM, TILAN ABEYRATNA, & UWE BURGHAUS, Ph.D., North Dakota State University &
- 2015 “Kinetic approach to study the gas-surface interaction of small organic molecules on graphene” **ND EPSCoR**, Fargo, ND, NILUSHNI SIVAPRAGASAM, ASHISH CHAKRADHAR, TILAN ABEYRATNA, & UWE BURGHAUS
- 2015 “Two dimensional zeolite materials for potential hydrodesulfurization reactions” **ND EPSCoR**, Fargo, ND, TILAN ABEYRATNA, ASHISH CHAKRADHAR, NILUSHNI SIVAPRAGASAM & UWE BURGHAUS
- 2014 “Study of catalytically active sites on CuOx/silica model catalysts nanofabricated by electron beam lithography”, **EPSCoR** state conference at UND, by A. Chakradhar, J. Shan, M. Komorneni, M. Lu, U. Burghaus
- 2013 “How to synthesize epitaxial graphene without STM or LEED? – Benzene adsorption on Ru(0001)”, **AVS** (American Vacuum Society) Minnesota Chapter Annual Symposium 2013, by K. Trettel (**REU** fellow), A. Chakradhar, and U. Burghaus
- 2012 “Synthesis, Characterization, and Hydrodesulfurization Activity of WS₂ Nanotube Supported Cobalt and Nickel Catalysts”, **NDSU Symposium** on Sustainable Materials and Light Induced Processes, by M. Komarneni, Z. Yu, A. Chakradhar, U. Burghaus, Y. Tsverin, R. Popovitz Biro, A. Zak, Y. Feldman, R. Tenne

- 2012 “*Study of Catalytically Active Sites on CuOx/Silica Model Catalysts Nanofabricated by EBL*”, **NDSU Symposium** on Sustainable Materials and Light Induced Processes, by A.Chakradhar, M. Komarneni, J. Shan, S. Cabrini, M. Lu, U. Burghaus
- 2012 “*Adsorption Kinetics of Small Molecules on Selenium Foil*”, **ND EPSCoR State Conference**, by ASHISH CHAKRADHAR, UWE BURGHAUS
- 2012 “*Molecular Beam Scattering of CO on Silica-supported Cluster Systems – the Case of Au, Cu, Cu-oxide Clusters*”, **ND EPSCoR State Conference**, by Mallikharjuna Rao Komarneni, Junjun Shan, Ashish Chakradhar, Evgueni Kadossov, Stefano Cabrini, Uwe Burghaus
- 2011 “*Molecular beam scattering study of CO adsorption on silica supported copper clusters.*”, **ND EPSCoR** state conference at NDSU, by J. Shan, M. Komarneni, U. Burghaus
- 2011 “*Adsorption of Water on a Hydrophobic Sb(111) Surface*”, **ND EPSCoR** state conference at NDSU, by A. Chakradhar, J. Shan, U. Burghaus
- 2011 “*Adsorption dynamics of CO on silica supported copper clusters*”, **ND EPSCoR** conference at UND, by J. Shan, M. Komarneni, U. Burghaus
- 2010 “*Adsorption and Dissociation of Thiophene on Silica-supported Mo and MoS_x Clusters*”, 6th Annual **Minnesota Nanotechnology** Conference, by M. Komarneni, E. Kadossov, U. Burghaus
- 2010 “*Adsorption Dynamics of CO on Silica-supported Gold Nanoclusters*”, 6th Annual **Minnesota Nanotechnology** Conference, by E. Kadossov, U. Burghaus
- 2010 “*Adsorption and Dissociation Kinetics of Alkanes on CaO (100)*”, **ND EPSCoR** state conference, UND, by A. Chakradhar, U. Burghaus
- 2009 “*Adsorption kinetics and dynamics on particulate matter model surfaces*”, **ND EPSCoR** state conference, NDSU, by E. Kadossov, J. Goering, S. Funk, U. Burghaus
- 2009 “*Possible effect of carbon nanotube crystal structure on gas-surface interactions: benzene, water, and n-pentane adsorption on SWCNTs at ultra-high vacuum conditions,*” **ND EPSCoR** state conference, NDSU, by M. Komarneni, A. Sand, J. Goering, U. Burghaus, M. Lu, L.M. Veca, Y.P. Sun
- 2008 “*Adsorption kinetics and dynamics of combustion gases on particulate matter model surfaces*”, by E. Kadossov, J. Goering, S. Funk, U. Burghaus, **ND EPSCoR** 2008 State Conference
- 2005 “*The formation of a ZnCu surface alloy*”, South Dakota/North Dakota **EPSCoR** 5th Biennial Joint Conference, Brookings, SD, by S. Funk, B. Hokkanen, J. Wang, U. Burghaus and G. Bozzolo, J.E. Garces
- 2004 “*Elementary Reaction Steps in the Synthesis of Methanol Over ZnO: A Molecular Beam Scattering Study*”, 12th Annual Science, Engineering & Mathematics Poster Session in Fargo, **ND-EPSCOR**, by B.W. Hokkanen, J. Wang, U. Burghaus.

WORKSHOPS / MEETINGS ATTENDED

- 2017 NDSU PURSUING FUNDING FOR LARGE TEAM AND CENTER GRANTS
- 2017 NDSU Gear up for Grants, “Finding Federal Funding: the Budget Factor”, Lee & Smith
- 2015 Promotion-to-professor luncheon, NDSU
- 2014 Promotion-to-professor luncheon, NDSU
- 2013 PTI committee workshop, NDSU
- 2012 PTI committee workshop, NDSU

- 2012 SUNRISE Meeting (DoE EPSCoR), NDSU
- 2012 College safety representatives meeting, NDSU
- 2011 NDSU promotion to full professor panel discussion.
- 2011 NDSU Summer Forum on Materials and Nanotechnology, Organizer E. Hobbie, et al.
- 2011 SUNRISE 2ND Technical Review Meeting, EPSCoR-DoE grant reporting meeting, 20 min presentation
- 2010 SUNRISE Technical Review Meeting, EPSCoR-DoE grant reporting meeting, two 15 min presentations from my end
- 2009 Catalysis Program Contractors Meeting (DoE) - "Frontiers in Catalysis: Advanced Synthesis, Characterization and Modeling", Annapolis, MD, May 2009, Due to the lack of funding I did not attend the meeting, but a three pages abstract has been included in the conference proceedings.
- 2008 ND DoE EPSCoR (grant) 2nd year meeting (May 2008, UND)
- 2008 Orientation workshop at the Argon National Laboratories (Chicago), IL
- 2007 Gear Up For Grants – “University Research – Business and Economic Development”, April 2007, NDSU
- 2007 ND DoE EPSCoR (grant) technical review meeting (February 2007, UND)
- 2006 ND EPSCoR 2006 State Conference, UND
- 2006 Visit of the NASA Glenn research center (together with a graduate student) supported and requested by a NASA seed grant
- 2006 Gear Up For Grants; organized by P. Boudjouk (NDSU)
- 2005 DOE/NSF EPSCoR Conference 2005: *Collaborative Research Opportunities for Clean, Affordable, and Secure Energy*, Morgantown, WV (Travel grant from ND EPSCoR).
- 2004 North Dakota BRIN Grant Writing Seminar – ND BRIN/GWSW (NIH and NSF), Fargo, ND
- 2003 Proposal Writing & Grant Management Workshop, NDSU, Fargo, ND organized by M. Sibi
- 2003 Biannual ND/SD Joint EPSCoR Conference, Fargo, ND
- 2003 CAREER Workshop/Panel discussion, NDSU, Fargo, ND, organized by D.R. Katti, contributions from Q. Huo, K.S. Katti, S. Mallik, S.C. Rasmussen

INVITED INTERNATIONAL TALKS PRIOR TO FARGO

IWOX (International Workshop On Oxides), Taos, USA, 2001

INVITED LOCAL (GROUP / DEPARTMENT SEMINAR) TALKS PRIOR TO FARGO, INVITED BY

- Dr. H.P. Rust (Abt. Oberflächenphysik), Department of Surface Science of the Fritz-Haber-Inst., Max-Planck-Gesellschaft in Berlin, *Dynamics of the CO adsorption on O-ZnO*, 1999
- Dr. I. Kopal, "J.Stefan" Institut, Ljubljana, Slovenia, *Low temperature CO oxidation on Ag(110)/Ag(001) and the influence of defects*, 1998
- Prof. Dr. K. Christmann, Department of Chemistry, Free University of Berlin, *CO oxidation on transition metal surfaces and future plans*, 1997

CHAired CONFERENCE SESSIONS PRIOR TO FARGO

Spring meeting of the German Physical Society: 1998 and 2002

GROUP SEMINAR TALKS PRIOR TO FARGO

- Prof. E. Matthias (emeritus), (FU-Berlin, Department of Physics, Germany)
- Prof. A. M. Bradshaw (emeritus), (FHI-Berlin, Department of Surface Physics, Germany)
- Prof. K.H. Rieder (emeritus), (FU-Berlin, Department of Physics, Germany)
- Prof. M. Rocca, (Centro di Fisica, Genoa, Italy)
- Prof. H.P. Steinrück, (Uni-Würzburg, Department of Physics, Germany), 1996
- Prof. G.A. Somorjai, (UC Berkeley, Department of Chemistry, USA), 1996
- Prof. W.H. Weinberg (emeritus), (UC Santa Barbara, Dept. Chem. Eng., USA)
- Prof. H.P. Steinrück, (Erlangen-Nuernberg, Department of Physics, Germany), 2004

CONFERENCE CONTRIBUTIONS PRIOR TO FARGO (LIST NOT COMPLETE)

- International: approx. 35 (including 7 AVS; 1 *post-deadline talk* at the AVS; 12 ECOS; 1 ACS, 15 other kinds)
- Local: approx. 25 (Conferences of the DPG and Bunsen Society, etc.)

DPG – Deutsche Physikalische Gesellschaft (German Physics Society) similar to AVS in the US
Bunsen Society – similar to ACS in the US