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Publications

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Fragmentation of clusters sputtered from silver and gold: Molecular dynamics simulations

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Mechanical properties of carbon nanotubes with vacancies and related defects

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Evolution of Cu nanoclusters on Cu(100)

Frantz, J., Rusanen, M., Nordlund, K. & Koponen, I., 2004, In: Journal of Physics. Condensed Matter. 16, p. 2995-3003

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KEINONEN, J., KURONEN, A., NORDLUND, K., NIEMINEN, R. M. & SEITSONEN, A. P., 1994, In: Nuclear Instruments & Methods in Physics Research. Section B: Beam Interactions with Materials and Atoms. 88, p. 382-386 5 p.

A LOW-LEVEL DETECTION SYSTEM FOR HYDROGEN ANALYSIS WITH THE REACTION $1\text{H}(15\text{N},\alpha\text{-}\gamma)12\text{C}$

TORRI, P., KEINONEN, J. & NORDLUND, K., 1994, In: Nuclear Instruments & Methods in Physics Research. Section B: Beam Interactions with Materials and Atoms. 84, p. 105-110 6 p.

LIFETIMES IN N-15 FROM GAMMA-RAY LINE-SHAPES PRODUCED IN THE $\text{H-2}(\text{N-14},\text{P-}\gamma)\text{AND N-14}(\text{THERMAL N},\gamma)\text{REACTIONS}$

RAMAN, S., JURNEY, E. T., STARNER, J. W., KURONEN, A., KEINONEN, J., NORDLUND, K. & MILLENER, D. J., 1994, In: Physical Review C (Nuclear Physics). 50, p. 682-697 16 p.

Projects

Materials- and Nanophysics Researcher Community (MATENA)

Ahlgren, T. (Participant), Aitola, K. (Participant), Arstila, K. (Participant), Avchachov, K. (Participant), Björkas, C. (Participant), Chrobak, D. (Participant), Costelle, L. (Participant), Djurabekova, F. (Participant), Fernandez Martinez, M. (Participant), Galambosi, S. (Participant), Hakala, M. (Principal Investigator), Harjunmaa, A. N. (Participant), Heinola, K. (Participant), Hirvelä, J. H. (Participant), Holmström, E. K. (Participant), Huotari, S. (Principal Investigator), Hämäläinen, K. (Principal Investigator), Ikonen, T. (Participant), Jalkanen, P. (Participant), Jansson, V. (Participant), Juurinen, I. (Participant), Keinonen, J. (Principal Investigator), Keyriläinen, J. (Participant), Kisko, K. (Participant), Koskelo, O. (Participant), Krasheninnikov, A. (Participant), Kuronen, A. (Principal Investigator), Lasa Esquisabel, A. (Participant), Laukkanen, J. K. (Participant), Lehtinen, O. J. (Participant), Lehtola, S. (Participant), Svedström, K. J. (Participant), Mattila, A. (Participant), Meinander, N. K. (Participant), Mizohata, K. (Participant), Nordlund, K. (Principal Investigator), Nygård, K. (Participant), Pakarinen, O. H. (Participant), Palonen, V. (Participant), Parviainen, S. (Participant), Peura, M. (Participant), Pirkkalainen, K. (Participant), Pirojenko, A. (Participant), Pohjonen, A. (Participant), Polvi, J. (Participant), Porra, L. (Participant), Pusa, P. (Participant), Pylkkänen, T. (Participant), Rauhala, E. (Participant), Ruotsalainen, K. (Participant), Ruzibaev, A. (Participant), Räsänen, J. (Principal Investigator), Sajavaara, T. P. (Participant), Sakko, A. (Participant), Serimaa, R. (Principal Investigator), Soininen, A. (Participant), Suhonen, H. (Participant), Timko, H. (Participant), Tolvanen, A. (Participant), Torkkeli, M. (Participant), Tuboltsev, V. (Participant), Ullah, M. (Participant), Väyrynen, S. (Participant) & Vörtler, K. (Participant)
22/02/2011 → 22/02/2011

Nanohiukkasten optiset ja pintaominaisuudet

Kulmala, M. (Participant), Nordlund, K. (Participant), Keinonen, J. (Participant), Sundholm, D. (Participant) & Räsänen, M. (Participant)
Suomen Akatemia
01/01/2007 → 31/12/2010

MachQu: Probabilistic Machine Learning for Quantum Mechanics-Based Material Design

Roos, T. (Principal Investigator), Djurabekova, F. (Principal Investigator) & Nordlund, K. (Participant)
01/01/2018 → 31/12/2019

Activities

TAITASMARTGIS

Pellikka, P. (Speaker: Chair), Böbling, T. (Speaker: Keynote), Hämeri, K. (Speaker: Keynote), Siljander, M. (Speaker: Chair), Alakukku, L. (Attendee), Tuure, J. (Speaker: Presenter), Mäkelä, P. (Attendee), Räsänen, M. (Speaker: Presenter), Mwamodenyi, J. M. (Speaker: Presenter), Wachiye, S. A. (Speaker: Presenter), Adhikari, H. (Speaker: Presenter), Amara, E. (Attendee), Heiskanen, J. (Attendee), Abera, T. (Speaker: Presenter), Maeda, E. (Attendee), Schallhart, S. (Attendee), Kutsch, W. (Speaker: Presenter), Autio, A. (Attendee), Karhu, K. (Speaker: Presenter), Mganga, K. (Attendee), Vesala, R. (Attendee), Arppe, L. (Attendee), Rosti, H. (Speaker: Presenter), Di Minin, E. (Attendee) & Nordlund, K. (Speaker: Presenter)
1 Oct 2019

Insights on sputtering and deposition mechanisms from molecular dynamics simulations

Nordlund, K. (Speaker)

7 Dec 2018

Possibility of materials modification by dark matter particle irradiation

Nordlund, K. (Speaker)

27 Nov 2018

Improving on analytical radiation damage calculations: arc-dpa and rpa

Nordlund, K. (Speaker)

16 Oct 2018

Fundamental mechanisms of accelerated and plasma ion interactions with materials: insights from atomistic simulations

Nordlund, K. (Speaker)

21 Jun 2018

Channeling effects in nanostructures: analysis and comparisons with experiments

Nordlund, K. (Speaker)

13 Apr 2018

Nuclear stopping power of antiprotons

Nordlund, K. (Speaker)

14 Mar 2018

Molecular dynamics simulations of collision cascades: method developments and results from 1993 on

Nordlund, K. (Speaker)

7 Dec 2017

High-dose damage evolution in Fe, FeCr, and high-entropy alloys

Nordlund, K. (Speaker)

15 Nov 2017

Improving atomic displacement calculations with physically realistic damage models: arc-dpa and rpa

Nordlund, K. (Speaker)

25 Oct 2017

Systematic analysis of ion channeling over all crystal directions: dependences on energy, crystal structure, atom size, temperature, and defect concentration

Nordlund, K. (Speaker)

24 Oct 2017

Insights to physics of sputtering and channeling effects learnt from molecular dynamic simulations

Nordlund, K. (Speaker)

21 Aug 2017

Current topics of modelling in materials science (in Helsinki)

Nordlund, K. (Speaker) & Djurabekova, F. G. (Speaker)

3 Aug 2017

20th INTERNATIONAL CONFERENCE ON SURFACE MODIFICATION OF MATERIALS BY ION BEAMS

Nordlund, K. (Attendee)

11 Jul 2017

Nanoscale pattern formation at surfaces and Formation of 3D nanostructures

Djurabekova, F. (Chair), Nordlund, K. H. (Chair), Fridlund, C. J. P. (Member of organizing committee), Ilinov, A. (Secretary of organizing committee), Lopez Cazalilla, A. (Member of organizing committee) & Kuronen, A. A. (Scientific Committee Vice Chair)

26 Jun 2017 → 30 Jun 2017

Tutorial: atomistic simulations for irradiation effects.

Nordlund, K. (Speaker)

15 Nov 2016

International conference on metallurgical coatings and thin films (ICMCTF)

Nordlund, K. (Speaker: Keynote)

2016

MRS fall meeting, symposium Ion Beam Enabled Nanoscale Fabrication and Materials Synthesis

Nordlund, K. (Speaker: Keynote)

2016

Summer school on plasma-surface interactions

Nordlund, K. (Speaker: Presenter)

2016

Workshop on nanocluster deposition

Nordlund, K. (Speaker: Keynote)

2016

Fysiikan päivät 2015

Nordlund, K. (Speaker: Keynote)

17 Mar 2015

CECAM workshop on Modeling metal-based nanoparticles: toward realistic environments

Nordlund, K. (Speaker: Keynote)

2015

International Symposium on Multi-scale Modeling and Simulation of Materials

Nordlund, K. (Speaker: Keynote)

2015

MRS Fall Meeting, symposium Defect and Radiation Effects in Advanced Materials

Nordlund, K. (Speaker: Keynote)

2015

MRS Spring Meeting, symposium Multiscale modeling of microstructural evolution in nuclear materials

Nordlund, K. (Speaker: Keynote)

2015

Radiation Effects in Insulators School, Invited tutorial talk

Nordlund, K. (Speaker: Keynote)

2015

Towards Reality in Nanoscale Materials

Nordlund, K. (Chair)

2015

Director of MATRENA doctoral programme

Nordlund, K. (Director)

1 Jan 2014 → ...

18th International Conference on Surface Modification of Materials by Ion Beams

Nordlund, K. (Speaker: Keynote)

2014

2014 Nuclear materials Conference

Nordlund, K. (Speaker: Keynote)

2014

22nd International Conference on Ion-Surface Interactions

Nordlund, K. (Speaker: Keynote)

2014

EMRS Spring meeting, Symposium Defect-induced effects in nanomaterials

Nordlund, K. (Speaker: Keynote)

2014

EUROFusion (External organisation)

Nordlund, K. (Member)

2014 → ...

European Grid Infrastructure Community Forum

Nordlund, K. (Chair)

2014

International Atomic Energy Agency (External organisation)

Nordlund, K. (Expert member)

2014 → 2017

Towards Reality in Nanoscale Materials

Nordlund, K. (Chair)

2014

Radiation Effects in Insulators

Nordlund, K. (Chair)

30 Jun 2013 → 5 Jul 2013

8th symposium of the International Society for Theoretical Chemical Physics

Nordlund, K. (Speaker: Keynote)

2013

EMRS Spring meeting, Symposium Ion Beam Applications: New and Innovative Approaches

Nordlund, K. (Speaker: Keynote)

2013

International Atomic Energy Agency (External organisation)

Nordlund, K. (Expert member)

2013 → 2017

IUMRS-ICAM Modeling & Simulation Session

Nordlund, K. (Chair)

2013

Towards Reality in Nanoscale Materials

Nordlund, K. (Chair)

2013

3rd EU-Russia Innovation Forum

Nordlund, K. (Speaker: Keynote)

2012

All-Russian Conference in Physical and physico-chemical bases of ion implantation

Nordlund, K. (Speaker: Keynote)

2012

Harriet Åhlgren, PhD thesis co-supervision

Nordlund, K. (Co-supervisor)

2012 → 2015

international committee for conference series Ion Beam Modification of Materials (IBMM) (External organisation)

Nordlund, K. (Board member)

2012 → ...

International supercomputing conference

Nordlund, K. (Speaker: Keynote)

2012

Joint ICTP-IAEA workshop on Fusion Plasma Modelling

Nordlund, K. (Speaker: Keynote)

2012

Recent developments in the study of radiation effects in matter (REM) invitation-only meeting

Nordlund, K. (Speaker: Presenter)

2012

Towards Reality in Nanoscale Materials

Nordlund, K. (Chair)

2012

20th International Conference on Ion-Surface Interactions

Nordlund, K. (Attendee)

2011

Aleksi A Leino, PhD thesis co-supervision

Nordlund, K. (Co-supervisor)

2011 → 2015

Andrea Sand, PhD thesis supervision

Nordlund, K. (Supervisor)

2011 → 2015

Andrey Ilinov, PhD thesis co-supervision

Nordlund, K. (Co-supervisor)

2011 → 2015

Breakdown Physics Workshop (MeVArc)

Nordlund, K. (Chair)
2011

EMRS/IUMRS/ICAM Spring meeting 2011 symposium 'Ion and cluster ion beams for the synthesis and controlled modification of nanomaterials'

Nordlund, K. (Chair)
2011

Fall MRS 2011 meeting, symposium Self-organization and nanoscale pattern formation

Nordlund, K. (Speaker: Keynote)
2011

International Committee for Radiation Effects in Insulators (REI) conference (External organisation)

Nordlund, K. (Board member)
2011 → 2015

Konstantin Avchachiov, PhD thesis supervision

Nordlund, K. (Co-supervisor)
2011 → 2015

OECD Nuclear Energy Agency (External organisation)

Nordlund, K. (Chair)
2011 → 2015

PRACE Summer School for advanced programming of Tier-0 supercomputers

Nordlund, K. (Speaker: Keynote)
2011

Spring MRS meeting, symposium Ion Beams – New Applications from the Mesoscale to Nanoscale

Nordlund, K. (Speaker: Keynote)
2011

Towards Reality in Nanoscale Materials

Nordlund, K. (Chair)
2011

18th International Workshop on Inelastic Ion-Surface Collisions

Nordlund, K. (Speaker: Keynote)
2010

24th International Conference on Atomic Collisions in Solids

Nordlund, K. (Speaker: Keynote)
2010

CECAM workshop on radiation damage and non-adiabatic simulations

Nordlund, K. (Speaker: Keynote)
2010

CIMTEC 2010 - 12th International Ceramics Congress & 5th Forum on New Materials

Nordlund, K. (Speaker: Keynote)
2010

Mohammad Wali Ullah, PhD thesis supervision

Nordlund, K. (Co-supervisor)
2010 → 2014

OECD Nuclear Energy Agency (External organisation)

Nordlund, K. (Chair)
2010 → 2014

SPIE Photonics West Meeting on Synthesis and Photonics of Nanoscale Materials VII (SPnsM-VII)

Nordlund, K. (Speaker: Keynote)
2010

Spring MRS meeting, symposium Materials for Nuclear Applications and Extreme Environments

Nordlund, K. (Speaker: Keynote)
2010

Towards Reality in Nanoscale Materials

Nordlund, K. (Chair)
2010

Aarne Pohjonen, PhD thesis co-supervision

Nordlund, K. (Co-supervisor)
2009 → 2013

Ane Lasa, PhD thesis supervision

Nordlund, K. (Supervisor)
2009 → 2013

Eero Holmström, PhD thesis supervision

Nordlund, K. (Supervisor)
2009 → 2012

Helga Timko, PhD thesis supervision

Nordlund, K. (Co-supervisor)
2009 → 2011

Nanostructures in silica

Nordlund, K. (Chair)
2009

Ville Jansson, PhD thesis co-supervision

Nordlund, K. (Co-supervisor)
2009 → 2013

Ville Jansson, PhD thesis supervision

Nordlund, K. (Co-supervisor)
2009 → 2013

Katharina Vörtler, PhD thesis supervision

Nordlund, K. (Supervisor)
2008 → 2011

Marie Backman, PhD thesis supervision

Nordlund, K. (Co-supervisor)
2008 → 2012

Antti Tolvanen, Co-Supervision of PhD thesis

Nordlund, K. (Supervisor)
2007 → 2010

Jussi Polvi, PhD thesis supervision

Nordlund, K. (Supervisor)
2007 → 2013

Ari Harjunmaa, Supervision of PhD thesis

Nordlund, K. (Supervisor)
2006 → 2011

Carolina Björkas, Supervision of PhD thesis

Nordlund, K. (Supervisor)
2006 → 2009

Niklas Juslin, Supervision of PhD thesis

Nordlund, K. (Supervisor)
2006 → 2009

Tommi Järvi, Supervision of PhD thesis

Nordlund, K. (Supervisor)
2006 → 2009

Invited talks at international conferences 2005 - 2010

Nordlund, K. (Speaker: Presenter)
1 Jan 2005 → 31 Dec 2010

Co-supervision of PhD thesis

Nordlund, K. (Supervisor)
2005 → 2007

Juha Samela, Supervision of PhD thesis

Nordlund, K. (Supervisor)
2005 → 2008

Supervision of PhD thesis

Nordlund, K. (Supervisor)
2004 → 2009

Supervision of PhD thesis

Nordlund, K. (Supervisor)
2002 → 2006

Krister Henriksson, Supervision of PhD thesis

Nordlund, K. (Supervisor)
2001 → 2005

International Committee for the Computer simulation of radiation effects in solids (COSIRES) conference (External organisation)

Nordlund, K. (Board member)

2000 → ...

Supervision of PhD thesis

Nordlund, K. (Supervisor)
2000 → 2003

Supervision of PhD thesis

Nordlund, K. (Supervisor)
2000 → 2003

Supervision of PhD thesis

Nordlund, K. (Supervisor)
2000 → 2004

Supervision of PhD thesis

Nordlund, K. (Supervisor)
1999 → 2002

Supervision of PhD student

Nordlund, K. (Supervisor)
1997 → 2000

Supervision of PhD thesis

Nordlund, K. (Supervisor)
1997 → 2000

Yunzheng Zhong, Co-supervision of PhD thesis

Nordlund, K. (Co-supervisor)
1997 → 1999