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Nordlund, K., Keinonen, J., Ghaly, M. & Averback, R. S., 1999, In: Nature. 398, p. 49-51 3 p.

Suppression of carbon erosion by hydrogen shielding during high-flux hydrogen bombardment
Salonen, E., Nordlund, K., Tarus, J., Ahlgren, T., Keinonen, J. & Wu, C. H., 1999, In: Physical Review B, Condensed Matter and Materials Physics. 60, p. 14005-14008 4 p.

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Tarus, J., Nordlund, K., Kuronen, A. & Keinonen, J., 1998, In: Physical Review B, Condensed Matter and Materials Physics. 58, p. 9907-9915 9 p.

Repulsive interatomic potentials calculated using Hartree-Fock and density-functional theory methods
Nordlund, K., Runeberg, N. & Sundholm, D., Oct 1997, In: Nuclear Instruments & Methods in Physics Research. Section B: Beam Interactions with Materials and Atoms. 132, 1, p. 45-54 10 p.

Comparison of TOF-ERDA and nuclear resonance reaction techniques for range profile measurements of keV energy implants
Jokinen, J., Keinonen, J., Tikkanen, P., Kuronen, A., Ahlgren, T. & Nordlund, K., 1996, In: Nuclear Instruments & Methods in Physics Research. Section B: Beam Interactions with Materials and Atoms. 119, 4, p. 533-542 10 p.

Formation of ion irradiation induced small-scale defects on graphite surfaces
Nordlund, K., Keinonen, J. & Mattila, T., 1996, In: Physical Review Letters. 77, p. 699-702 4 p.

Stopping of 5-100 keV helium in tantalum, niobium, tungsten, and AISI 316L steel
Haussalo, P., Nordlund, K. & Keinonen, J., 1996, In: Nuclear Instruments & Methods in Physics Research. Section B: Beam Interactions with Materials and Atoms. 111, p. 1-6 6 p.

Range profiles in self-ion-implanted crystalline Si
Nordlund, K., Keinonen, J., Rauhala, E. & Ahlgren, T., 1995, In: Physical Review. B, Condensed Matter. 52, p. 15170-15175 6 p.

1ST-PRINCIPLES SIMULATION OF COLLISION CASCADES IN SI TO TEST PAIR-POTENTIALS FOR SI-SI INTERACTION AT 10 EV-5 KEV
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 1H (15N,ALPHA-GAMMA)12C
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LIFETIMES IN N-15 FROM GAMMA-RAY LINE-SHAPES PRODUCED IN THE H-2(N-14,P-GAMMA) AND N-14(Thermal N,Gamma) 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., Aitola, K., Arstila, K., Avchachov, K., Björkas, C., Chrobak, D., Costelle, L., Djurabekova, F., Fernandez Martínez, T., Galambosi, S., Hakala, M., Harjunmaa, A. N., Heinola, K., Hirvelä, J. H., Holmström, E. K., Huotari, S., Hämäläinen, K., Ilonen, T., Jalkanen, P., Jansson, V., Juurinen, I., Keinonen, J., Keyrila, J., Koskela, O., Krasheninnikov, A., Kuronen, A., Lasak Esquisabel, A., Laukkanan, J. K., Lehtinen, O. J., Lehtola, S., Leppänen, K., Mattila, A., Meinander, N. K., Mizohata, K., Nordlund, K., Nygård, K., Pakarinen, O. H., Palonen, V., Parviainen, S., Peura, M., Pirkkalainen, K., Pirojenko, A., Pohjonen, A., Polvi, J., Porra, L., Pusa, P., Pykkänen, T., Rauhala, E., Ruotsalainen, K., Ružibave, A., Rääsänen, J., Sajavaara, T. P., Sakko, A., Serimaa, R., Soininen, A., Suhonen, H., Timko, H., Tolvanen, A., Torkkeli, M., Tuboltsev, V., Ullah, M., Väyrynen, S. & Vörter, K.

22/02/2011 → ...

**Nanohiukkasten optiset ja pintaominaisuudet**

Kulmala, M., Nordlund, K., Keinonen, J., Sundholm, D. & Räsänen, M.

Suomen Akatemia

01/01/2007 → 31/12/2010

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

Roos, T., Djurabekova, F. & Nordlund, K.

01/01/2018 → 31/12/2019

Activities

**TAITASMARTGIS**

Petri Pellikka (Speaker: Chair), Tom Böhling (Speaker: Keynote), Kaarle Hämeri (Speaker: Keynote), Mika Siljander (Speaker: Chair), Laura Alakukku (Attendee), Juuso Tuure (Speaker: Presenter), Pirjo Mäkelä (Attendee), Matti Räsänen (Speaker: Presenter), James Mwangombe Mwamodenyi (Speaker: Presenter), Sheila Aswani Wachiye (Speaker: Presenter), Hari Adhikari (Speaker: Presenter), Edward Amara (Attendee), Janne Heiskanen (Attendee), Temesgen Abera (Speaker: Presenter), Eduard Maeda (Attendee), Simon Schallhart (Attendee), Werner Kutsch (Speaker: Presenter), Antti Autio (Attendee), Kristina Karhu (Speaker: Presenter), Kevin Mganga (Attendee), Risto Vesala (Attendee), Laura Arppe (Attendee), Hanna Rosti (Speaker: Presenter), Enrico Di Minin (Attendee) & Kai Nordlund (Speaker: Presenter)

1 Oct 2019

**Insights on sputtering and deposition mechanisms from molecular dynamics simulations**

Kai Nordlund (Speaker)

7 Dec 2018

**Possibility of materials modification by dark matter particle irradiation**

Kai Nordlund (Speaker)

27 Nov 2018

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

Kai Nordlund (Speaker)

16 Oct 2018

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

Kai Nordlund (Speaker)

21 Jun 2018

**Channeling effects in nanostructures: analysis and comparisons with experiments**

Kai Nordlund (Speaker)

13 Apr 2018

**Nuclear stopping power of antiprotons**

Kai Nordlund (Speaker)

14 Mar 2018
Molecular dynamics simulations of collision cascades: method developments and results from 1993 on
Kai Nordlund (Speaker)
7 Dec 2017

High-dose damage evolution in Fe, FeCr, and high-entropy alloys
Kai Nordlund (Speaker)
15 Nov 2017

Improving atomic displacement calculations with physically realistic damage models: arc-dpa and rpa
Kai Nordlund (Speaker)
25 Oct 2017

Systematic analysis of ion channeling over all crystal directions: dependences on energy, crystal structure, atom size, temperature, and defect concentration
Kai Nordlund (Speaker)
24 Oct 2017

Insights to physics of sputtering and channeling effects learnt from molecular dynamic simulations
Kai Nordlund (Speaker)
21 Aug 2017

Current topics of modelling in materials science (in Helsinki)
Kai Nordlund (Speaker) & Flyura Gatifovna Djurabekova (Speaker)
3 Aug 2017

20th INTERNATIONAL CONFERENCE ON SURFACE MODIFICATION OF MATERIALS BY ION BEAMS
Kai Nordlund (Attendee)
11 Jul 2017

Nanoscale pattern formation at surfaces and Formation of 3D nanostructures
Flyura Djurabekova (Chair), Kai Henrik Nordlund (Chair), Christoffer John Patrik Fridlund (Member of organizing committee), Andrew Ilinov (Secretary of organizing committee), Alvaro Lopez Cazalilla (Member of organizing committee) & Antti Armas Kuronen (Scientific Committee Vice Chair)
26 Jun 2017 → 30 Jun 2017

Tutorial: atomistic simulations for irradiation effects.
Kai Nordlund (Speaker)
15 Nov 2016

International conference on metallurgical coatings and thin films (ICMCTF)
Kai Nordlund (Speaker: Keynote)
2016

MRS fall meeting, symposium Ion Beam Enabled Nanoscale Fabrication and Materials Synthesis
Kai Nordlund (Speaker: Keynote)
2016

Summer school on plasma-surface interactions
Kai Nordlund (Speaker: Presenter)
2016

Workshop on nanocluster deposition
Kai Nordlund (Speaker: Keynote)
2016
Fysiikan päivät 2015
Kai Nordlund (Speaker: Keynote)
17 Mar 2015

CECAM workshop on Modeling metal-based nanoparticles: toward realistic environments
Kai Nordlund (Speaker: Keynote)
2015

International Symposium on Multi-scale Modeling and Simulation of Materials
Kai Nordlund (Speaker: Keynote)
2015

MRS Fall Meeting, symposium Defect and Radiation Effects in Advanced Materials
Kai Nordlund (Speaker: Keynote)
2015

MRS Spring Meeting, symposium Multiscale modeling of microstructural evolution in nuclear materials
Kai Nordlund (Speaker: Keynote)
2015

Radiation Effects in Insulators School, Invited tutorial talk
Kai Nordlund (Speaker: Keynote)
2015

Towards Reality in Nanoscale Materials
Kai Nordlund (Chair)
2015

Director of MATRENA doctoral programme
Kai Nordlund (Director)
1 Jan 2014 → …

18th International Conference on Surface Modification of Materials by Ion Beams
Kai Nordlund (Speaker: Keynote)
2014

2014 Nuclear materials Conference
Kai Nordlund (Speaker: Keynote)
2014

22nd International Conference on Ion-Surface Interactions
Kai Nordlund (Speaker: Keynote)
2014

EMRS Spring meeting, Symposium Defect-induced effects in nanomaterials
Kai Nordlund (Speaker: Keynote)
2014

EUROFusion (External organisation)
Kai Nordlund (Member)
2014 → …
European Grid Infrastructure Community Forum
Kai Nordlund (Chair)
2014

International Atomic Energy Agency (External organisation)
Kai Nordlund (Expert member)
2014 → 2017

Towards Reality in Nanoscale Materials
Kai Nordlund (Chair)
2014

Radiation Effects in Insulators
Kai Nordlund (Chair)
30 Jun 2013 → 5 Jul 2013

8th symposium of the International Society for Theoretical Chemical Physics
Kai Nordlund (Speaker: Keynote)
2013

EMRS Spring meeting, Symposium Ion Beam Applications: New and Innovative Approaches
Kai Nordlund (Speaker: Keynote)
2013

IUMRS-ICAM Modeling & Simulation Session
Kai Nordlund (Chair)
2013

International Atomic Energy Agency (External organisation)
Kai Nordlund (Expert member)
2013 → 2017

Towards Reality in Nanoscale Materials
Kai Nordlund (Chair)
2013

3rd EU-Russia Innovation Forum
Kai Nordlund (Speaker: Keynote)
2012

All-Russian Conference in Physical and physico-chemical bases of ion implantation
Kai Nordlund (Speaker: Keynote)
2012

Harriet Åhgren, PhD thesis co-supervision
Kai Nordlund (Co-supervisor)
2012 → 2015

International supercomputing conference
Kai Nordlund (Speaker: Keynote)
2012

Joint ICTP-IAEA workshop on Fusion Plasma Modelling
Kai Nordlund (Speaker: Keynote)
2012
Recent developments in the study of radiation effects in matter (REM) invitation-only meeting
Kai Nordlund (Speaker: Presenter)
2012

Towards Reality in Nanoscale Materials
Kai Nordlund (Chair)
2012

International committee for conference series Ion Beam Modification of Materials (IBMM) (External organisation)
Kai Nordlund (Board member)
2012 → ...

International Committee for Radiation Effects in Insulators (REI) conference (External organisation)
Kai Nordlund (Board member)
2011 → 2015

20th International Conference on Ion-Surface Interactions
Kai Nordlund (Attendee)
2011

Aleksi A Leino, PhD thesis co-supervision
Kai Nordlund (Co-supervisor)
2011 → 2015

Andrea Sand, PhD thesis supervision
Kai Nordlund (Supervisor)
2011 → 2015

Andrey Ilinov, PhD thesis co-supervision
Kai Nordlund (Co-supervisor)
2011 → 2015

Breakdown Physics Workshop (MeVArC)
Kai Nordlund (Chair)
2011

EMRS/IUMRS/ICAM Spring meeting 2011 symposium 'Ion and cluster ion beams for the synthesis and control modification of nanomaterials' 
Kai Nordlund (Chair)
2011

Fall MRS 2011 meeting, symposium Self-organization and nanoscale pattern formation
Kai Nordlund (Speaker: Keynote)
2011

Konstantin Avchachiov, PhD thesis supervision
Kai Nordlund (Co-supervisor)
2011 → 2015

OECD Nuclear Energy Agency (External organisation)
Kai Nordlund (Chair)
2011 → 2015
PRACE Summer School for advanced programming of Tier-0 supercomputers
Kai Nordlund (Speaker: Keynote)
2011

Spring MRS meeting, symposium Ion Beams – New Applications from the Mesoscale to Nanoscale
Kai Nordlund (Speaker: Keynote)
2011

Towards Reality in Nanoscale Materials
Kai Nordlund (Chair)
2011

18th International Workshop on Inelastic Ion-Surface Collisions
Kai Nordlund (Speaker: Keynote)
2010

24th International Conference on Atomic Collisions in Solids
Kai Nordlund (Speaker: Keynote)
2010

CECAM workshop on radiation damage and non-adiabatic simulations
Kai Nordlund (Speaker: Keynote)
2010

CIMTEC 2010 - 12th International Ceramics Congress & 5th Forum on New Materials
Kai Nordlund (Speaker: Keynote)
2010

Mohammad Wali Ullah, PhD thesis supervision
Kai Nordlund (Co-supervisor)
2010 → 2014

OECD Nuclear Energy Agency (External organisation)
Kai Nordlund (Chair)
2010 → 2014

SPIE Photonics West Meeting on Synthesis and Photonics of Nanoscale Materials VII (SPnsM-VII)
Kai Nordlund (Speaker: Keynote)
2010

Spring MRS meeting, symposium Materials for Nuclear Applications and Extreme Environments
Kai Nordlund (Speaker: Keynote)
2010

Towards Reality in Nanoscale Materials
Kai Nordlund (Chair)
2010

Aarne Pohjonen, PhD thesis co-supervision
Kai Nordlund (Co-supervisor)
2009 → 2013
Ane Lasa, PhD thesis supervision
Kai Nordlund (Supervisor)
2009 → 2013

Eero Holmström, PhD thesis supervision
Kai Nordlund (Supervisor)
2009 → 2012

Helga Timko, PhD thesis supervision
Kai Nordlund (Co-supervisor)
2009 → 2011

Nanostructures in silica
Kai Nordlund (Chair)
2009

Ville Jansson, PhD thesis co-supervision
Kai Nordlund (Co-supervisor)
2009 → 2013

Ville Jansson, PhD thesis supervision
Kai Nordlund (Co-supervisor)
2009 → 2013

Katharina Vörtler, PhD thesis supervision
Kai Nordlund (Supervisor)
2008 → 2011

Marie Backman, PhD thesis supervision
Kai Nordlund (Co-supervisor)
2008 → 2012

Antti Tolvanen, Co-Supervision of PhD thesis
Kai Nordlund (Supervisor)
2007 → 2010

Jussi Polvi, PhD thesis supervision
Kai Nordlund (Supervisor)
2007 → 2013

Ari Harjunmaa, Supervision of PhD thesis
Kai Nordlund (Supervisor)
2006 → 2011

Carolina Björkas, Supervision of PhD thesis
Kai Nordlund (Supervisor)
2006 → 2009

Niklas Juslin, Supervision of PhD thesis
Kai Nordlund (Supervisor)
2006 → 2009

Tommi Järvi, Supervision of PhD thesis
Kai Nordlund (Supervisor)
2006 → 2009
Invited talks at international conferences 2005 - 2010
Kai Nordlund (Speaker: Presenter)
1 Jan 2005 → 31 Dec 2010

Co-supervision of PhD thesis
Kai Nordlund (Supervisor)
2005 → 2007

Juha Samela, Supervision of PhD thesis
Kai Nordlund (Supervisor)
2005 → 2008

Supervision of PhD thesis
Kai Nordlund (Supervisor)
2004 → 2009

Supervision of PhD thesis
Kai Nordlund (Supervisor)
2002 → 2006

Krister Henriksson, Supervision of PhD thesis
Kai Nordlund (Supervisor)
2001 → 2005

International Committee for the Computer simulation of radiation effects in solids (COSIRES) conference (External organisation)
Kai Nordlund (Board member)
2000 → …

Supervision of PhD thesis
Kai Nordlund (Supervisor)
2000 → 2003

Supervision of PhD thesis
Kai Nordlund (Supervisor)
2000 → 2003

Supervision of PhD thesis
Kai Nordlund (Supervisor)
2000 → 2004

Supervision of PhD thesis
Kai Nordlund (Supervisor)
1999 → 2002

Supervision of PhD student
Kai Nordlund (Supervisor)
1997 → 2000

Supervision of PhD thesis
Kai Nordlund (Supervisor)
1997 → 2000
