List of publications – Göran Wahnström

In total about 100 papers in scientific journals with referee system of which 10 in Physical Review Letters. 3 invited chapters in books. 1 patent.

Total number of citations: 2078. H-index: 25. Average citations per item: 20.78 (Web of Science 2011-06-07)

The ten most cited papers

1. Molecular-dynamics study of relaxation of supercooled *ortho-terphenyl*
   Laurent J. Lewis and Göran Wahnström,
   Phys. Rev. E **50**, 3865 (1994). Number of citations: 145

2. Molecular-dynamics study of a supercooled two-component Lennard-Jones system
   Göran Wahnström,
   Phys. Rev. A **44**, 3752 (1991). Number of citations: 141

3. Vacancies in metals: from first-principles calculations to experimental data
   Karin Carling, Göran Wahnström, Thomas R. Mattsson, Ann E. Mattsson, Nils Sandberg, and Göran Grimvall,
   Phys. Rev. Lett. **85**, 3862 (2000). Number of citations: 106

4. Peierls Barriers and Stresses for Edge Dislocations in Pd and Al Calculated from First Principles
   J. Hartford, B. von Sydow, G. Wahnström, and B. I. Lundqvist,
   Phys. Rev. B **58**, 2487 (1998). Number of citations: 88

5. The calculation of the thermal rate coefficient by a method combining classical and quantum mechanics
   Göran Wahnström, Benny Carmeli, and Horia Metiu,
   J. Chem. Phys. **88**, 2478 (1988). Number of citations: 66

6. Incoherent scattering function in simple classical liquids
   G. Wahnström and L. Sjögren,
   J. Phys. C: Solid State Phys. **15**, 401 (1982). Number of citations: 59

7. Motion of "hot" oxygen adatoms on corrugated metal surfaces
   Göran Wahnström, Ann B. Lee and Johan Strömqvist,
   J. Chem. Phys. **105**, 326 (1996). Number of citations: 57

8. Transient hyperthermal diffusion following dissociative chemisorption – a molecular-dynamics study
   Christer Engdahl and Göran Wahnström,
   Surf. Sci. **312**, 429 (1994). Number of citations: 55

9. Diffusion of an adsorbed particle: Theory and numerical results
Göran Wahnström,
Surf. Sci. **159**, 311 (1985). Number of citations: 55

10. First-Principles Simulations of Metal-Ceramic Interface Adhesion: Co/WC versus Co/TiC
Mikael Christensen, Sergey Dudiy and Göran Wahnström,
Phys. Rev. B **65**, 045408 (2002). Number of citations: 47

Refereed original papers

1. Incoherent scattering function in simple classical liquids
G. Wahnström and L. Sjögren,
J. Phys. C: Solid State Phys. **15**, 401 (1982). Number of citations: 59

2. Diffusion of an adsorbed particle: Theory and numerical results
Göran Wahnström,
Surf. Sci. **159**, 311 (1985). Number of citations: 55

3. Continuum elastic treatment of surface lattice dynamics
Göran Wahnström,
Surf. Sci. **164**, 437 (1985).

4. Diffusion of an adsorbed particle: Dependence on the mass
Göran Wahnström,
Surf. Sci. **164**, 449 (1985).

5. Diffusion of an adsorbed particle: Dependence on the adatom-substrate interaction
Göran Wahnström,
Phys. Rev. B **33**, 1020 (1986). Number of citations: 25

6. Motion of an adsorbed atom: Theory and numerical results
G. Wahnström,
J. Electron Spec. **38**, 95 (1986).

7. Diffusion of an adsorbed particle: Temperature dependence
Göran Wahnström,
J. Chem. Phys. **84**, 5931 (1986).

8. A time-dependent method for computing thermal rate constants
Göran Wahnström and Horia Metiu,
Chem. Phys. Lett. 134, 531 (1987). Number of citations: 37

9. Numerical study of the correlation function expressions for the thermal rate coefficients in quantum systems
Göran Wahnström and Horia Metiu,
J. Phys. Chem. **92**, 3240 (1988). Number of citations: 42

10. The calculation of the thermal rate coefficient by a method combining classical and quantum mechanics
Göran Wahnström, Benny Carmeli, and Horia Metiu,
J. Chem. Phys. **88**, 2478 (1988). Number of citations: 66

11. Multiple jump rates for site-to-site hopping on a one-dimensional lattice
G. Wahnström and H. Metiu,
Chem. Phys. Lett. 145, 44 (1988).

12. A model study of hydrogen diffusion on surfaces: Barrier recrossing, multiple jumps and randomization
Göran Wahnström, Keneth Haug and Horia Metiu,
Chem. Phys. Lett. 148, 158 (1988). Number of citations: 24

13. Hydrogen diffusion on a solid-surface
A model study of hydrogen diffusion on surfaces: Barrier recrossing, multiple jumps and randomization
G. Wahnström, K. Haug, A. dePristo, and Horia Metiu,
Abstr. Pap. A. Chem. S. **196** 94 (1988).

14. The computation of thermal rate coefficients in quantum-systems – hydrogen diffusion on Cu(100)
H. Metiu, G. Wahnström, and K. Haug,
Abstr. Pap. Am. Chem. S. **197** 36 (1989).

15. Surface self-diffusion of hydrogen on copper: Quantum aspects and correlated jumps
Göran Wahnström,
J. Chem. Phys. **89**, 6996 (1988).

16. Role of phonons and electron-hole pairs in hydrogen diffusion on a corrugated metal surface
Göran Wahnström,
Chem. Phys. Lett. 163, 401 (1989). Number of citations: 26

17. Hydrogen motion on a Cu surface: A model study of the rate of single and double site-to-site jumps and the role of the motion perpendicular to the surface
Kenneth Haug, Göran Wahnström, and Horia Metiu,
J. Chem. Phys. **90**, 540 (1989). Number of citations: 30

18. Hydrogen motion on a rigid Cu surface: The calculation of the site to site hopping rate by using flux-flux correlation functions
Kenneth Haug, Göran Wahnström, and Horia Metiu,
J. Chem. Phys. **92**, 2083 (1990). Number of citations: 35

19. Dynamic anomalies in a supercooled liquid: A molecular dynamics study
Göran Wahnström,
Physica Scripta **44**, 116 (1991).

20. Dynamic susceptibility in a supercooled liquid: A molecular dynamics study
Göran Wahnström,
J. Non-Crystalline Solids **131-133**, 109 (1991).

21. Dynamics and statistics of surface diffusion at finite coverages
G. Wahnström and V. P. Zhdanov,
Surf. Sci. **247**, 74 (1991).

22. Molecular-dynamics study of a supercooled two-component Lennard-Jones system
Göran Wahnström,
Phys. Rev. A **44**, 3752 (1991). Number of citations: 141

23. Nonadiabatic effects in hydrogen diffusion in metals
Yinggang Li and Göran Wahnström,
Phys. Rev. Lett. 68, 3444 (1992). Number of citations: 23

24. Relaxation of a molecular glass at intermediate times
Laurent J. Lewis and Göran Wahnström,
Solid State Commun. **86**, 295 (1993). Number of citations: 26

25. Molecular dynamics simulation of hydrogen diffusion in palladium
Yinggang Li and Göran Wahnström,
Phys. Rev. B **46**, 14528 (1992). Number of citations: 25

26. H diffusion on Ni(100), a quantum Monte Carlo simulation
Thomas R. Mattsson, Urban Engberg, and Göran Wahnström,
Phys. Rev. Lett. 71, 2615 (1993). Number of citations: 45

27. Some tests of basic assumptions in transition state theory for hydrogen diffusion in FCC-metals
U. Engberg, Y. Li and G. Wahnström,
J. Phys.: Condens. Matter **5,** 5543 (1993).

28. Rapid local diffusion of hydrogen in niobium revealed by a molecular-dynamics study
Göran Wahnström and Yinggang Li,
Phys. Rev. Lett. 71, 1031 (1993).

29. Molecular dynamics simulation of a molecular glass at intermediate times
Göran Wahnström and Laurent J. Lewis,
Physica A **201**, 150 (1993). Number of citations: 20

30. Transient hyperthermal diffusion following dissociative chemisorption – a molecular-dynamics study
Christer Engdahl and Göran Wahnström,
Surf. Sci. **312**, 429 (1994). Number of citations: 55

31. Rotational dynamics in ortho-terphenyl: a microscopic view
Laurent J. Lewis and Göran Wahnström,
J. Non-Crystall. Solids **172**, 69 (1994).

32. Molecular-dynamics study of relaxation of supercooled *ortho-terphenyl*
Laurent J. Lewis and Göran Wahnström,
Phys. Rev. E **50**, 3865 (1994). Number of citations: 145

33. Quantum Monte Carlo study of surface diffusion
Thomas R. Mattsson and Göran Wahnström,
Phys. Rev. B **51**, 1885 (1995). Number of citations: 28

34. Molecular-dynamics simulation of hydrogen diffusion in niobium
Yinggang Li and Göran Wahnström,
Phys. Rev. B **51**, 12233 (1995).

35. Quantum aspects of hydrogen motion in Nb at high temperatures
Björn von Sydow, Göran Wahnström and Yinggang Li,
J. Alloys Compounds **231**, 214 (1995).

36. Lattice distortions around frozen and mobile hydrogen in niobium: a molecular-dynamics study
Björn von Sydow and Göran Wahnström,
Phys. Rev. B **53**, 3171 (1996).

37. Motion of "hot" oxygen adatoms on corrugated metal surfaces
Göran Wahnström, Ann B. Lee and Johan Strömqvist,
J. Chem. Phys. **105**, 326 (1996). Number of citations: 57

38. Quantum-mechanical calculation of H on Ni(001) using a model potential based on first-principles calculations
Thomas R. Mattsson, Göran Wahnström, Lennart Bengtsson, and Björk Hammer,
Phys. Rev. B **56**, 2258 (1997). Number of citations: 45

39. Isotope effect in hydrogen surface diffusion
T. R. Mattsson and G. Wahnström,
Phys. Rev. B **56**, 14944 (1997).

40. Translational and reorientational motion in supercooled ortho-terphenyl - a molecular-dynamics study
G. Wahnström and L. J. Lewis,
Prog. Theor. Phys. Suppl. No **126**, 261 (1997).

41. Low frequency vibrations in monomers, dimers and polymers of propylene glycol
P. Ahlström, G. Wahnström, P. Carlsson, S. Schantz, A. Brodin, F. Maurer and L. M. Torell,
Phil. Mag. B **77**, 699 (1998).

42. Raman scattering from systems of linear chain molecules (PPO) of different lengths: a comparison with MD simulations
A. Brodin, L. M. Torell, P. Ahlström and G. Wahnström,
Phil. Mag. B **77**, 709 (1998).

43. Peierls Barriers and Stresses for Edge Dislocations in Pd and Al Calculated from First Principles
J. Hartford, B. von Sydow, G. Wahnström, and B. I. Lundqvist,
Phys. Rev. B **58**, 2487 (1998). Number of citations: 88

44. Atomistic simulations and Peierls-Nabarro analysis of Schockley partial dislocations in palladium
Björn von Sydow, Jan Hartford, and Göran Wahnström,
Comput. Mater. Sci. **15**, 367 (1999). Number of citations: 20

45. Al dimer dynamics on Al(111)
Alexander Bogicevic, Per Hyldgaard, Göran Wahnström, and Bengt I. Lundqvist,
Phys. Rev. Lett. 81, 172 (1998). Number of citations: 37

46. Quantum Monte Carlo simulation of atomic motion
Göran Wahnström and Thomas Mattsson,
Comp. Phys. Comm. **121**, 477 (1999).

47. Molecular-dynamics simulation of structural and conformational properties of poly(propylene oxide)
Peter Ahlström, Oleg Borodin, Göran Wahnström, Erik J. W. Wensink, Patrik Carlsson, and Grant D. Smith,
J. Chem. Phys. **112,** 10669 (2000). Number of citations: 13

48. Vacancies in metals: from first-principles calculations to experimental data
Karin Carling, Göran Wahnström, Thomas R. Mattsson, Ann E. Mattsson, Nils Sandberg, and Göran Grimvall,
Phys. Rev. Lett. 85, 3862 (2000). Number of citations: 106

49. Density-functional bridge between surfaces and interface
B.I Lundqvist, A. Bogicevic, K. Carling, S.V. Dudiy, S. Gao, J. Hartford, P. Hyldgaard, N. Jacobson, D.C. Langreth, N. Lorente, S. Ovesson, B. Razaznejad, C. Ruberto, H. Rydberg, E. Schröder, S.I. Simak, G. Wahnström, and Y. Yourdshahyan,
Surf. Sci. **493**, 253 (2001). Number of citations: 24

50. Quantum path-integral simulation of poly(propylene oxide)
Mattias Slabanja and Göran Wahnström,
Chem. Phys. Lett. 342, 593 (2001). Number of citations: 1

51. Neglected adsorbate interactions behind diffusion prefactor anomalies on metals
S. Ovesson, A. Bogicevic, G. Wahnström, and B.I. Lundqvist,
Phys. Rev. B **64**, 125423 (2001). Number of citations: 46

52. Quantum treatment of H adsorbed on a Pt(111) surface
Gustav Källén and Göran Wahnström,
Phys. Rev. B **65**, 033406 (2002). Number of citations: 14

53. First-Principles Simulations of Metal-Ceramic Interface Adhesion: Co/WC versus Co/TiC
Mikael Christensen, Sergey Dudiy and Göran Wahnström,
Phys. Rev. B **65**, 045408 (2002). Number of citations: 47

54. Bridging between micro- and macroscales of materials by mesoscopic models
B.I. Lundqvist, A. Bogicevic, S. Dudiy, P. Hyldgaard, S. Ovesson, C. Ruberto, E. Schröder, and G. Wahnström,
Comput. Mater. Sci. **24**, 1 (2002). Number of citations: 2

55. Vacancy concentration in Al from combined first-principles and model potential calculations
Karin M. Carling, Göran Wahnström, Thomas R. Mattsson, Nils Sandberg, and Göran Grimvall,
Phys. Rev. B **67**, 054101 (2003). Number of citations: 23

56. Co-phase penetration of WC(10$\underline{1}$0)/WC(10$\underline{1}$0) grain boundaries from first principles
Mikael Christensen and Göran Wahnström,
Phys. Rev. B **67**, 115415 (2003). Number of citations: 26

57. Energetics, vibrational spectrum, and scanning tunneling microscopy images for the intermediate in water production reaction on Pt(111) from density functional calculations
G. S. Karlberg, F. E. Olsson, M. Persson and G. Wahnström,
J. Chem. Phys. **119**, 4865 (2003). Number of citations: 39

58. Effects of cobalt intergranular segregation on interface energetics in WC-Co
Mikael Christensen and Göran Wahnström,
Acta Mater. **52**, 2199 (2004). Number of citations: 27

59. Density-Functional Based Modeling of the Intermediate in the Water Production Reaction on Pt(111)
G. S. Karlberg and G. Wahnström,
Phys. Rev. Lett. 92, 136103 (2004). Number of citations: 18

60. Activation energies for quantum diffusion of hydrogen in metals and on metal surfaces using delocalized nuclei within the density-functional theory
Per G. Sundell and Göran Wahnström,
Phys. Rev. Lett. 92, 155901 (2004). Number of citations: 18

61. Quantum motion of hydrogen on Cu(001) using first-principles calculations
Per G. Sundell and Göran Wahnström,
Phys. Rev. B **70**, 081403(R) (2004). Number of citations: 13

62. Self-trapping and diffusion of hydrogen in Nb and Ta from first principles
Per G. Sundell and G. Wahnström,
Phys. Rev. B **70**, 224301 (2004). Number of citations: 14

63. Quantitative analysis of WC grain shape in sintered WC-Co cemented carbides
M. Christensen, G. Wahnström, C. Allibert, and S. Lay,
Phys. Rev. Lett. 94, 066105 (2005). Number of citations: 15

64. An Interaction Model for OH+H_2O-Mixed and Pure H_2O Overlayers Adsorbed on Pt(111)
G. S. Karlberg and G. Wahnström,
J. Chem. Phys. **122**, 194705 (2005). Number of citations: 20

65. Hydrogen tunneling on a metal surface: A density-functional study of H and D atoms on Cu(001)
P. G. Sundell and G., Wahnström,
Surf. Sci., **593**, 102 (2005). Number of citations: 6

66. Early stages of phase separation using three-dimensional atom probe and atomistic modelling
M. Slabanja, J. Angenete, K. Stiller, K. M. Carling, G. Wahnström, and H.-O. Andren,
Surface and Interface Analysis, **39** 178 (2007). Number of citations: 3

67. Kinetic Monte Carlo Study of Al-Mg Precipitation
M. Slabanja and G. Wahnström,
Acta Mater. **53**, 3721 (2005). Number of citations: 8

68. Vibrational Properties of protons in hydrated $BaIn_xZr_{1-x}O_{3-x/2}$
M. Karlsson, M. Björketun, P.G. Sundell, A. Matic, G. Wahnström, D. Engberg, L. Börjesson, I. Ahmed, S. Eriksson, P. Berastegui,
Phys. Rev. B **72**, 094303 (2005). Number of citations: 27

69. A kinetic Monte Carlo study of proton diffusion in disordered perovskite structured lattices based on first-principles calculations
M. E. Björketun, P.G. Sundell, G. Wahnström, D. Engberg,
Solid State Ionics, **176**, 3035 (2005). Number of citations: 21

70. Effect of Σ2 grain boundaries on plastic deformation of WC-Co cemented carbides
G. Östberg, M. U. Farooq, M. Christensen, H.-O. Andren, U. Klement, G. Wahnström,
Materials Science and Engineering A, **416**, 119 (2006). Number of citations: 7

71. Strength and reinforcement of interfaces in cemented carbides
M. Christensen and G. Wahnström,
Int. J. Refract. Hard Mater., **24**, 80 (2006). Number of citations: 8

72. The segmental and rotational dynamics of PPO, above the glass-transition, investigated by Neutron Scattering and Molecular Dynamics simulations
C. Tengroth, D. Engberg, P. Carlsson, P. Ahlström, G. Wahnström, W. S. Howells, L. Börjesson
Soft Materials **3**, 1 (2005). Number of citations: 2

73. Mechanisms of plastic deformation of WC-Co and Ti(C,N)-WC-Co
G. Östberg, K. Buss, M. Christensen, S. Norgren, H.-O. Andren, D. Mari, G. Wahnström, I. Reineck
Int. J. Refract. Hard Mater., **24**, 135 (2006). Number of citations: 16

74. Effect of TaC on plastic deformation of WC-Co and Ti(C,N)-WC-Co
G. Östberg, K. Buss, M. Christensen, S. Norgren, H.-O. Andren, D. Mari, G. Wahnström, I. Reineck
Int. J. Refract. Hard Mater., **24**, 145 (2006). Number of citations: 13

75. Interface energy of semicoherent metal-ceramic interfaces
S. A. E. Johansson, M. Christensen, G. Wahnström
Phys. Rev. Lett. 95, 226108 (2005). Number of citations: 10

76. Thermodynamics of doping and vacancy formation in $BaZrO_3$ perovskite oxide from density functional calculations
P. G. Sundell, M. E. Björketun, and G. Wahnström
Phys. Rev. B **73**, 104112 (2006). Number of citations: 22

77. Structure and thermodynamic stability of hydrogen interstitials in $BaZrO_3$ perovskite oxide from density functional calculations
M. E. Björketun, P. G. Sundell, and G. Wahnström
Faraday Discussions, **134**, 247 (2007). Number of citations: 23

78. Water desorption from an oxygen covered Pt(111) surface: Multichannel desorption
G. S. Karlberg, G. Wahnstrom, C. Clay, G. Zimbitas, A. Hodgson
J. Chem. Phys. **124**, 204712 (2006). Number of citations: 8

79. Morphology of WC grains in WC-Co alloys: Theoretical determination of grain shape
M. Christensen, G. Wahnstrom, S. Lay, C. H. Allibert
Acta Mater. **55**, 1515 (2007). Number of citations: 13

80. Density-functional calculations of prefactors and activation energies for H diffusion in $BaZrO_3$
P. G. Sundell, M. Björketun, and G. Wahnström
Phys. Rev. B **76**, 094301 (2007). Number of citations: 15

81. Effect of acceptor dopants on the proton mobility in $BaZrO_3$: A density functional investigation
M. Björketun, P. G. Sundell, and G. Wahnström
Phys. Rev. B **76**, 054307 (2007). Number of citations: 25

82. Morphology of WC grains in WC-Co alloys
S. Lay, C. H. Allibert, M. Christensen, and G. Wahnstrom
Materials Science and Engineering A, **486**, 253 (2008). Number of citations: 8

83. Nature of boron solution and diffusion in α-iron
Dan H. R. Fors and Göran Wahnström
Phys. Rev. B. **77**, 132102 (2008). Number of citations: 5

84. Monte Carlo Simulation of Multi-Core Magnetic Nanoparticles
V. Schaller, G. Wahnström, A. Sanz-Velasco, P. Enoksson, C. Johansson
J. Magn. Magn. Mater, **321**, 1400 (2009). Number of citations: 8

85. Protonic defects in pure and doped $La_2Zr_2O_7$ pyrochlore oxide
M. E. Björketun, C. S. Knee, B. J. Nyman, G. Wahnström
Solid State Ionics, **178**, 1642 (2008). Number of citations: 8

86. Motion of nanometre sized magnetic particles in a magnetic field gradient
Vincent Schaller, Ulli Kräling, Cristina Rusu, Karolina Petersson, Jan Wipenmyr, Anatol Krozer, Göran Wahnström, Anke Sanz-Velasco, Peter Enoksson, Christer Johansson
(also in: Virtual Journal of Nanoscale Science & Technology, **18** (22) (2008))
J. App. Phys., **104,** 093918 (2008). Number of citations: 5

87. Influence of Pt on the metal-oxide interface during high temperature oxidation of NiAl bulk materials
H. Svensson, M. Christensen, P. Knutsson, G. Wahnström, K.Stiller
Corrosion Science, **51**, 539 (2009). Number of citations: 5

88. Quasielastic neutron scattering of hydrated $BaZr_{0.90}A_{0.10}O_{2.95}$ (A = Y and Sc)
M. Karlsson, A. Matic, D. Engberg, M. E. Björketun, M. M. Koza, I. Ahmed, G. Wahnstroem, P. Berastegui, L. Börjesson, S. Eriksson
Solid State Ionics, **180**, 22 (2009). Number of citations: 4

89. Using Neutron Spin-Echo to Investigate Proton Dynamics in Proton-Conducting Perovskites
M. Karlsson, D.Engberg, M. E. Björketun, A. Matic, G. Wahnström, P. G. Sundell, P. Berastegui, I. Ahmed, P.Falus, B. Farago, L. Börjesson, S. Eriksson
Chemistry of Materials, **22**, 740 (2010). Number of citations: 6

90. Path integral treatment of proton transport processes in $BaZrO_3$
Q. Zhang, G. Wahnström, M. E. Björketun, S. Gao, E. Wang
Phys. Rev. Lett. 101, 215902 (2008). Number of citations: 3

91. Effective magnetic moment of magnetic multi-core nanoparticles
V. Schaller, G. Wahnström, A. Sanz-Velasco, S. Gustafsson, E. Olsson, P. Enoksson, C. Johansson
Phys. Rev. B **80**, 092406 (2009). Number of citations: 5

92. Theory of Ultrathin Films at Metal-Ceramic Interfaces
S. A. E. Johansson and G. Wahnström
Phil. Mag. Lett. **90**, 599 (2010). Number of citations: 3

93. A computational study of cubic carbide films in WC/Co interfaces
S.A.E. Johansson and G. Wahnström
Acta Mater. **59**, 171 (2011).

94. Transition metal solubilities in WC in cemented carbide materials
Jonathan Weidow, Sven Johansson, Hans-Olof Andren, Göran Wahnström
J. Am. Ceram. Soc. **94**, 605 (2011).

95. Theoretical investigation of moderate misfit and interface energetics in the Fe/VN system
D. H. R. Fors, S. A. E. Johansson, M. V. G. Petisme, and G. Wahnström
Comput: Mater. Sci. **50**, 550 (2010).

96. Theoretical study of interface structure and energetic in semicoherent Fe(001)/*MX*(001) systems (*M* = Sc, Ti, V, Cr, Zr, Nb, Hf, Ta; *X* = C or N)
D. H. R. Fors and G. Wahnström
Phys. Rev. B **82**, 195410 (2010).

97. Substitutional doping and oxygen vacancies in $La_2Zr_2O_7$ pyrochlore oxide
B. J. Nyman, M. E. Björketun, G. Wahnström
Solid State Ionics, **189**, 19 (2011).

98. First-principles investigation of the stability of MN and CrMN precipitates under coherency strains in α-Fe (M = V, Nb, Ta)
D. H. R. Fors and G. Wahnström
J. Appl. Phys. **109**, 113709 (2011).

Refereed conference papers

1. H motion in Pd and Nb: a molecular-dynamics study
Yinggang Li and Göran Wahnström
in *Materials Theory and Modeling*,
Eds J. Broughton, P. Bristowe and J. M. Newsam (MRS, Pittsburgh, 1993).

2. Quantum diffusion calculations of H on Ni(001) using a model potential based on first principles calculations
T. R. Mattsson and G. Wahnström,
in NATO ASI Series B: Physics, *Surface diffusion: Atomistic and collective processes*,
ed. M. Tringides (Plenum, New York, 1997).

3. Effect of grain boundary geometry on plastic deformation in WC-Co
G. Östberg, H.-O. Andrén, M. Christensen, G. Wahnström, M. U. Farooq, U. Klement, and I. Reineck
Proc. Euro PM 2002. EPMA, Shrewsbury, 85-90 (2002).

4. WC grain shape as a function of the carbon potential in WC-Co alloys
S. Lay, C. H. Allibert, M. Christensen, G. Wahnström,
presented at the 16th Plansee Seminar, Reutte, Tyrol, Austria (2005).

5. Theoretical investigation of the motion of magnetic nanoparticles in a magnetic field gradient
Vincent Schaller, Cristina Rusu, Peter Enoksson, Göran Wahnström, Christer Johansson
Nanotech Northern Europe 2007 (NTNE2007), Helsinki (2007).

6. Monte Carlo Simulation of Multi-Core Magnetic Nanoparticles
V. Schaller, G. Wahnström, A. Sanz-Velasco, P. Enoksson, C. Johansson
7th International Conference on the Scientific and Clinic Applications of Magnetic Carriers, Vancouver, Canada, May 20-24, pp. 27 (2008).

7. Energetics and structure of interfaces in WC-Co alloys from first-principles calculations
M. Slabanja, S. A. E. Johansson, and G. Wahnström,
presented at the 17th Plansee Seminar, Reutte, Tyrol, Austria (2009).

8. The effect of dipolar interactions in clusters of magnetic nanocrystals
V. Schaller, G. Wahnström, A. Sanz-Velasco, P. Enoksson and C. Johansson
Journal of Physics: Conference Series **200**, 072085 (2010).

9. Determination of Nanocrystal Size Distribution in Magnetic Multicore Particles Including Dipole-Dipole Interactions and Magnetic Anisotropy: a Monte Carlo Study
V. Schaller, G. Wahnström, A. Sanz-Velasco, P. Enoksson and C. Johansson
American Institute of Physics: Conference Proceedings **1311**, 42 (2010).

Book chapters

1. Rate Equations, Rate Constants and Surface Diffusion
G. Wahnström,
invited review in *Interaction of Atoms and Molecules with Solid Surfaces*,
Eds V. Bortolani, N. H. March and M. P. Tosi (Plenum, New York, 1990).

2. Hydrogen diffusion on metal surfaces - Nonadiabatic effects
G. Wahnström,
invited review in *Many-Atom Interactions in Solids*,
Eds R. M. Nieminen, M. J. Puska, and M. J. Manninen (Springer, Berlin, 1990).

3. Diffusion in Solids
G. Wahnström,
invited review in *Handbook of Materials Modeling, Fundamental Models and Methods*,
Eds S. Yip (Springer, 2005).

Patents

1. Cemented carbide
   S. Norgren, M. Christensen and G. Wahnström,
   patent no SE 0401037-7 (22 April 2004), US patent 11/110,880 (April 21, 2005).

Popular science

1. Dagens bild, stavhopparen Patrik Kristiansson
   Göran Wahnström
   Göteborgs vetenskapsfestivalen (2006).

2. Sportens fysik
   Göran Wahnström
   Göteborgs vetenskapsfestivalen (2006).

3. Atomic Scale Materials Theory Meets Industry
   G. Wahnström
   invited report, National Supercomputer Centre News, no 4 (2009).