

CURRICULUM VITAE

NAME Kalliopi Trohidou
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STUDIES

1982 First Degree in Physics University of Ioannina Greece.
1983 PhD scholarship from NCSR "Demokritos"
1984 PhD Scholarship from the British Council (Rutherford Appleton Laboratory,
Reading University)
1988 PhD Degree in Physics, University of Athens Greece.
PhD Thesis : Study of the dynamic properties of electrons in Solid State, using
inelastic magnetic neutron scattering.

POSITIONS HELD

1988 - 1989 Research Associate at the Condensed Matter theory group Rutherford-Appleton
Laboratory, U.K.
1989 - 1990 Research Associate at Physics Department University of Reading, U.K.
1991- 1995 Research Associate at the Materials Science Institute, NCSR "Demokritos".
1992 (July-September) Visiting Scientist at Reading University.
1993 -1995 Senior Lecturer at the Department of Physics Chemistry and Materials
Technology, Technical University of Piraeus
1995 - present Researcher, 1997 Principle Researcher, 2004 Director of Research at the
Materials Science Institute (IMS) (Current Name **Institute of Nanoscience and
Nanotechnology (INN)**) NCSR "Demokritos".
1995 - 2008 Honorary Fellow at Reading University, U.K.
2004 - present Scientist in charge of the Computational Modeling of Nanostructured Materials
Group at INN.
2008 - 2014 Deputy Director of IMS and IAMPPNM(the intermediate name after the merger of
IMS with IPC and IMEL).
2000 - 2004 Member of the Scientific Advisory Board of IMS

Current research activities

My research activities include study of nanostructured materials for spintronics, energy and biomedical applications.

Research Grants: Participation in 22 research projects in the period (1990-2017):

3 National, 2 from NCSR "D", 1 NATO, 2 Bilateral, 10 EU, 4 GREEK-EU (ESPA)

List of Selected Grants

- 1990 - 1994 “Neutron and Photon Studies of Magnetic Materials” . : Research Network ,55.000 ECU from EU(SCIENCE SCI*-0467-(SMA)), and 5,000,000 GDR from General Secretariat of Research and Technology (GGET).
- 1993 - 1997 “x-ray studies of the structure and electronic properties of magnetic materials” Research Network , 52.000 ECU from EU(HCM- ERB CHRXT930135) and 5,000,000 GDR from General Secretariat of Research and Technology (GGET).
- 1997: Electronic properties of magnetic materials”: 15000 Euros, Marie Curie fellowship Category 40, EU (ERBFMBICT961753)
- 1996-1998: “Aggregation mechanism of small magnetic particles”, 10,000,000 GDR EU(EPET II) (PENED - a/a 497)
- 1/5/1999-30/4/2001: *Scientist in Charge for the NCSR Project “Dhmoereuna” with title: ‘Study of the magnetic properties of granular materials’*. Budget 4.000.000 GDR.
- 1/5/00-30/9/01: 11.800 ECU (Marie Curie fellowship Category 40, contract no HPMF-CT-1999-00351) for collaboration with Dr. R. Botet (CNRS Orsay, France) on “Computer Modelling of Nanostructured Magnetic Materials”.
- 1/9/2001-30/12/2004. Scientist in charge from Demokritos for the EU FP5 Growth project (contract no G5RD-CT-2001-00478, AMMARE) με τίτλο “New Nanoscale Materials for Advanced Magnetic Storage Devices”. The project was a collaboration of eight European Research Centers and Universities (Leicester, Reading, Lyon, Stratsbourg, Rostock, Toulouse, IMS-NCSR “D”and IESL-FORTH and one company (Seagate Technology Inc, Londonderry, Northern Ireland, UK). Total Budget 2,298,281 Euros.
- 2001-2002 Co-ordinator NATO Collaborative Linkage Grant. Study of magnetic relaxation in 2D nanoparticle ensembles. Collaboration between IMS (NCSR “D”) and Summy State University Ukraine. Budget 5000 Euros.
- 2003-2005. Scientist in Charge for the bilateral Greek- British project with title “High Performance Nanstructured Materials” Νανοδομικά Μαγνητικά Υλικά Υψηλής Απόδοσης. Collaboration (IMS-NCSR”D”- Leicester University). Total Budget 25,000 Euros.
- 1/2/2005-30/11/2008. Scientist in charge from Demokritos for the EU FP6 STREP project with title “Self-organised complex-spin magnetic nanostructures” (contract no NMP4-CT -2004-013545 NANOSPIN). The project was a collaboration of eight European Research Centers and Universities (Leicester, Reading, Summy state, Barcelona, Surrey,IMS-NCSR “D”and ISM-CNR) and one company (NT-MTD, Russia). Total Budget 1,800,00 Euros.
- FP7 REGPOT Project Regpot EaGLES – 316014 (2012-2016)
- ARISTEIA I– Scientist in Charge of the project ‘Complex Magnetic Nanostructures COMANA 22’ funding from the European Social Fund (ESF) - European Union and National Resources NSRF, 2012-2015.
- R&D Co-operation Greece-Hungary (NSRF) - Magnetic Interactions in Multilayer Heterostructures, MIS HUN 48, 2012-2014
- ARISTEIA I-Member of the research team of the project MAGNACORE (Scientist in Charge D. Niarchos), funding from the European Social Fund (ESF) - European Union and National Resources NSRF, 2012-2015
- THALIS. External Collaborator Member of the Demokritos team in project MACOMYMS (scientist in Charge A. Bountis) 2012-2015
- HORIZON2020-FETPOACT “**MAGENTA**” – **MAGneticnanoparticle based liquid ENergy materials for Thermoelectric device Applications**» (E-12130) Grant Agreement No **731976**. Total budget ~4000000 Euros(1/1/201731/12/2020)

Organisation of Conferences

- 1993-1995, 1997-1998, 2001: Member of the organising committee for 6 International Conferences (Euroconferences) with financial support from the EU, Patras Greece.
- 1994: Organiser of an International Workshop with title "Photon and Neutron Studies of Magnetic Materials", Greece.
- 1997: Co-organiser of a Summer School held to NCSR "Demokritos" with title "Neutron Scattering Studies of Materials".
- 2000: Member of the organising committee of the Hellenic Solid State Conference, Nafplio-Greece.
- 2007 and 2010-2013: International Advisory Board of the 3rd and 4th of the International Seeheim Conference on Magnetism, Frankfurt Germany.
- 2010: Member of the local organizing Committee of an International Workshop on the Physics of Magnetic oxides, Santorini, Greece.
- 2011: Member of the National advisory and local organising committee of the 20th International Conference on Soft Magnetic Materials, Kos, Greece.
- 2015: Organiser of an International Workshop on Complex Magnetic Nanostructure, Aegina Greece, 2-5 June 2015.
- 2015: Member of the Program Committee of the International Conference of Magnetism, Barcelona Spain July 2015.

Publications

- Co-author of over 100 Publications in Refereed Journals.
- Author of 7 chapters in books.
- Author of 4 Review articles
- Editor of the Book "Magnetic Nanoparticles Assemblies" (published in 2014 by Pan Stanford Publishing, Singapore)

Times cited ~2100 (H-index 21)

Conferences

- Over 190 conferences participation with presentation
- More than 60 Invited talks in Conferences, Universities and Research Centers

Supervision of: 7 PhD students, 3 master students and 12 PhD postdoctoral fellows.

Teaching activities

1991-1993: Physics courses at the Technological Institute of Piraeus, Athens Greece

1995: Teaching part of the Solid State Courses in the Graduate program of NCSR "D"-National Technical University of Athens (NTUA)

1996-2008: Teaching of the Computational Physics Courses in the Graduate program of NCSR-"D"-NTUA and after 1999 also in collaboration with the graduate courses of the Institute of Microelectronics.

2009: Teaching part of the Special courses on complex systems in the Graduate program of NCSR "D"-NTUA

Other Activities

- Guest Editor of Physica B Condensed Matter (318, No 4, 2002)

- Editorial Board of the Journal of Magnetism and Magnetic Materials (2015-2017)
- Referee for more than 25 Scientific Journals and several International Conferences.

List of Publications

1. S.W. Lovesey and K.N. Trohidou : Magnetic Neutron-Electron Scattering; Use of the f-sum rule to assess the effect of electron correlations, lattice interaction magnetic field. *Zkreif fur Phys.* B62, p207 (1986).
2. S.W. Lovesey and K.N. Trohidou : Neutron excitation of Landau and collective modes in a magnetized plasma. *Nuovo Cimento D8*, p399 (1986).
3. J.A Blackman, C.Petrillo, K.N. Trohidou, J.F. Cooke, S.W. Lovesey, F. Sacchetti: Neutron Scattering of electrons in simple metals; a band structure calculation for sodium. *J Phys.C20*,p3887 (1987).
4. J.A. Blackman, K.N. Trohidou,C. Petrillo, J.F. Cooke, S.W. Lovesey, F. Sacchetti : On the calculation of the dynamic structure factor from band structure models; application to iron . *J. Phys. C20*, p3897 (1987).
5. K.N. Trohidou, J.A. Blackman, J.F. Cooke : Spin and orbital contributions to the dynamical structure factors of paramagnetic transition metals. *Phys. Rev. B37*, p8154 (1988).
6. J.M.F. Gunn and K.N. Trohidou :Critical reflection activation analysis-A new near-surface probe.(RAL-88-072) ; *J. Phys.D : Applied Phys.* 22, p1001 (1989).
7. K.N. Trohidou and J.M.F. Gunn :How to measure the wavefunction of an adatom. The semiclassical theory of desorbtive scattering. *J Phys.-Condensed Matter* , 1, p9513 (1989).
8. K.N.Trohidou and J.A.Blackman:Monte Carlo Simulations on antiferromagnetic Ising particles. *Phys.Rev. B41*, p9345(1990).
9. S.W. Lovesey and K.N.Trohidou: Static and Dynamic Susceptibilities of ferromagnets calculated with Spin Wave Theory including Dipolar Forces. *Phys. Condensed Matter* 3, p1827(1991).
10. K.N. Trohidou, J.A. Blackman and J.F.Cooke: Calculation on the High Energy Spin Wave Spectrum of hcp Cobalt. *Physical Review Letters* 67, p2561(1991).
11. S.W. Lovesey, E.B.Karlsson and K.N.Trohidou: Muon Spin Relaxation in Ferromagnets. (I) Spin-Wave Fluctuations. RAL-91-037; *J.Phys. Condensed Matter* 4, p2043(1992).
12. S.W. Lovesey, K.N. Trohidou and E.B. Karlsson :Muon Spin Relaxation in ferromagnets (II)Critical and Paramagnetic Magnetization Fluctuations. (RAL- 91-038); *J. Phys. Condensed Matter* 4, p2061(1992).
13. K.N. Trohidou, C.M. Soukoulis, A. Kostikas and G. Hadjipanayis: Size dependence of coercivity of small magnetic particles. *Journal of Magnetism and Magnetic Materials* 104-107, p1587(1992).
14. J.A. Blackman, K.N. Trohidou and J.F.Cooke: High Energy Spin waves in cubic and hcp transition metals. *Journal of Magnetism and Magnetic Materials* 104, p721(1992).
15. K.N. Trohidou and S.W.Lovesey: The spectrum of longitudinal spin fluctuations in a ferromagnet including dipolar and Zeeman energies. *J. Phys. Condensed Matter* 5, p1109(1993).
16. S.W Lovesey, D. Kechrakos and K.N. Trohidou: Magnetic Photon Scattering. *Zkreif fur Kristallographie* 209, 7, p565(1994).
17. K.N.Trohidou and J.A.Blackman: Aggregation and segregation in a mixture of magnetic and non-magnetic particles. *Phys. Rev B51*, p11521(1995).
18. D. Kechrakos, K.N. Trohidou and S.Taddei: Orbital effects in the inelastic magnetic scattering of X-Rays. *Phys.Rev. B56*, p10812 (1997).
19. X. Zianni, K.N. Trohidou and J.A. Blackman: The effect of surface anisotropy on the coercive field of small magnetic particles. *J. Appl. Phys.* 81, p4738 (1997).

20. K.N. Trohidou and J.A. Blackman: Magnetic behavior of the oxygen deficient Perovskite PrBaCuFeO_{5+y} . *J Appl. Phys.* 81, p5293 (1997).
21. D. Kechrakos and K.N. Trohidou: Effects of Dipolar Interactions on the Magnetic Properties of Granular Solids. *J. Magn. Magn. Mat.* 177-183, p943(1998) .
22. K.N. Trohidou and D. Kechrakos: Magnetisation behaviour of small particle aggregates. *J. Phys Condens. Matter* 10 , p255 (1998).
23. K.N. Trohidou, X. Zianni and J.A. Blackman: Magnetization and coercivity of antiferromagnetic particles *IEEE Transactions on Magnetics* 34, p1120(1998).
24. K.N. Trohidou, X. Zianni and J.A. Blackman: Surface effects on the magnetic behavior of antiferromagnetic particles. *J. Appl. Phys.* Vol 84, 5, p2795(1998)
25. A. Provata and K.N. Trohidou: Spatial Distribution and Fractal Properties of Aggregating Magnetic and Non-magnetic particles. *Fractals* Vol 6,3, p219(1998).
26. X. Zianni and K.N. Trohidou: Monte Carlo simulations on the coercive behaviour of oxide coated ferromagnetic particles. *Journal of Physics Condensed Matter* Vol 10, p7475(1998).
27. D. Kechrakos and K.N. Trohidou: Magnetic properties of dipolar interacting single domain particles. *Phys Rev B*, Vol.58, No17, 1998, No.18, p12169(1998)
28. X. Zianni and K.N. Trohidou: Magnetization reversal mechanisms in small antiferromagnetic particles. *J Appl. Phys.*, Vol.85, No.2, p1050(1999).
29. A. Tzavellas and K.N. Trohidou: Anisotropic Magnetic Systems with competing inter-layer interactions. *J Appl. Phys.*, Vol.85, No.8 Pt2B, p6091(1999).
30. D. Kechrakos and KN Trohidou: Magnetic structure and giant magnetoresistance in granular metals. *J Appl. Phys.*, Vol.87, No.8 (2000)
31. S.I. Denisov, V.F. Nefedchenko and K.N. Trohidou. Dipolar ferromagnetism in nanoparticle ensembles. *J. Phys. Condensed Matter* 12, p7111(2000)
32. D. Kechrakos and KN Trohidou: Interplay of dipolar interactions and grain size distribution in the giant magnetoresistance of granular metals. *Phys. Rev. B* **62**, 3941(2000)
33. A. Tzavellas, K. N. Trohidou, D. Kechrakos and N. Moutis. Magnetic Behavior of the $\text{La}_{1-y}\text{Ca}_y\text{Mn}_{1-x}\text{Fe}_x\text{O}_3$ perovskites. *Appl. Phys. Lett.* **77**, p3627 (2000)
34. D. Kechrakos and KN Trohidou. Scaling behavior of the magnetoresistance in magnetic particle aggregates. *Phys. Rev. B.* **63** , 134422 (2001)
35. A. Tzavellas and K. N. Trohidou. Study of the Ground State Properties of the Perovskites $\text{R}(\text{Y},\text{Pr})\text{BaCuT}(\text{Fe},\text{Co})\text{O}_{5+y}$ within the Hubbard Model. *J. Appl. Phys.* **89**, p7317 (2001)
36. D. Kechrakos and KN Trohidou. Conditions for optimum giant magnetoresistance in granular metals. *J. Appl. Phys.* 89, p7293(2001).
37. SI Denisov and KN Trohidou . Fluctuation theory of magnetic relaxation for two-dimensional ensembles of dipolar interacting nanoparticles. *Phys. Rev B* **64**, 184433(2001)
38. R. Botet, KN Trohidou , JA Blackman JA and D. Kechrakos. Scaling laws in magneto-optical properties of aggregated ferrofluids . *Phys. Rev E* **64**, 031401 (2001).
39. X. Zianni, D. Velessiotis, N. Glezos and KN Trohidou. Application of the partial wave expansion method in 3-D low energy electron beam lithography simulation. *Microelectron Eng* 57-8: p297(2001)
40. C Binns, MJ Maher ,QA Pankhurst QA, .D. Kechrakos and KN Trohidou. Magnetic behavior of nanostructured films assembled from preformed Fe clusters embedded in Ag. *Phys Rev* **B66**, 1844 (2002).

41. D. Kechrakos and KN Trohidou. Magnetic properties of self-assembled interacting nanoparticles. *Appl. Phys. Lett* **81**, p4574 (2002).
42. D. Kechrakos and KN Trohidou. Spin correlations and electronic transport in magnetic nanoclusters. *Physica B* 318, p360 (2002).
43. SI Denisov and KN Trohidou. Mean-field theory of magnetic relaxation for 2D nanoparticle ensembles. *Phys. St. Solidi A*189, p265(2002).
44. D Kechrakos and KN Trohidou. Dipolar interaction effects in the spin-dependent transport in nanoparticle systems. *Phys. St. Solidi A*189, p277(2002).
45. KN Trohidou, X Zianni and JA Blackman. Magnetic behavior of antiferromagnetic and composite ferro-antiferromagnetic nanoparticles. *Phys. St. Solidi A*189, p305(2002).
46. SI Denisov, T. Luytuy and KN Trohidou. Magnetic relaxation in finite two-dimensional nanoparticle ensembles. *Phys Rev* **B67**, 014411(2003).
47. D Kechrakos and KN Trohidou. Competition between dipolar and exchange interparticle interactions in magnetic nanoparticle films. *J Magn.Magn. Mat.* 262, p107(2003).
48. D Kechrakos and KN Trohidou. Numerical study of the collective magnetic behavior of nanoparticle assembled films. *Appl. Surf. Sc.*, 226, p261(2004)
49. I. Chado, J.P. Bucher, D. Kechrakos, K.N. Trohidou, Tunable magnetic properties of cluster assembled films grown from low temperature co-depositions. *J. Phys.Cond. Matt* **16**, p2287(2004).
50. SI Denisov, T. Luytuy and KN Trohidou. Thermal decay of the magnetization in two-dimensional nanoparticle ensembles. *J Magn.Magn. Mat.* 272-76, 665(2004).
51. SI Denisov, T. Luytuy and KN Trohidou. Dipolar interaction effects on the thermally activated magnetic relaxation of two-dimensional nanoparticle ensembles. *Appl. Phys. Lett* **84**, p4672(2004).
52. E. Eftaxias, KN Trohidou and C. Binns. The coercive behaviour of core/shell nanoparticles. *Phys. St. Sol. C*, p3361(2004).
53. D. Kechrakos, KN Trohidou, JP Bucher and I Chado. Numerical study of the structure and the magnetic properties of Co clusters on Au surfaces. *Phys. St. Sol. A* 201 (15): 3300-3304 (2004).
54. E. Eftaxias, KN Trohidou. *Numerical study of the exchange bias effects in magnetic nanoparticles with core/shell morphology*. *Phys. Rev.* **B71**, 134406 (2005).
55. D.Kechrakos and KN Trohidou. Monte Carlo study of the magnetic behavior of self-assembled nanoparticles. *J Magn. Magn. Mater* **295**, p177(2005).
56. J.Bansmann, SH Baker, C. Binns, JA Blackman, JP Bucher, J Dorantes-Davila, V. Dupuis, L. Favre, A Kleibert, KH Meiwes-Broer, GM Pastor, A. Perez, O. Toulemonde, KN Trohidou, J. Tuillon, Y Xie. Magnetic properties of Cluster assembled nanostructures. *Surf. Sci. Rep.* **56**, 189(2005).
57. D. Kechrakos, N. Papanikolaou, KN Trohidou and T. Dietl. Monte Carlo simulations of ferromagnetism in p-Cd_xMn_{1-x}Te quantum wells. *Cond-mat/0407356. Phys. Rev. Lett* **94**, 127201 (2005).
58. D. Kechrakos and KN Trohidou. Correlation between tunneling magnetoresistance and magnetization in dipolar coupled nanoparticle arrays. *Cond mat/0407814. Phys. Rev.* **B71**, art. no. 054416 (2005).

59. C. Binns, KN Trohidou, J. Bansmann, SH Baker, JA Blackman, JP Bucher, J Dorantes-Davila, V. Dupuis, L. Favre, A Kleibert, KH Meiwes-Broer, GM Pastor, A. Perez, O. Toulemonde, J. Tuailon, Y Xie The behaviour of nanostructured magnetic materials produced by depositing gas-phase nanoparticles. *J. Phys. D: Appl. Phys.* **38**, R357 (2005).
60. D. Fiorani, L. Del Bianco, A. M. Testa, K.N. Trohidou. Glassy dynamics in the exchange bias properties of the Fe/FeOxide nanogranular system. *Phys. Rev* **B73**, 092403(2006).
61. Denisov SI, Lyutyy TV, Hanggi P, Trohidou KN. Dynamical and thermal effects in nanoparticle systems driven by a rotating magnetic field. *Phys. Rev* **B74**, 104406 (2006).
62. D. Kechrakos D, KN Trohidou . Monte Carlo study of the transverse susceptibility in ordered arrays of magnetic nanoparticles. *Phys. Rev* **B74** (14), 144403 (2006)
63. E. Eftaxias, M. Vasilakaki and K. N. Trohidou. A Monte Carlo study of the exchange bias effects in magnetic nanoparticles with ferromagnetic core/antiferromagnetic shell morphology. *Modern Phys. Lett* **B21**, 1169 (2007)
64. K.N. Trohidou , M. Vasilakaki , L. Del Bianco , D. Fiorani , A. M. Testa. Exchange bias in a magnetic ordered/disordered nanoparticle system: A Monte Carlo simulation study, *JMMM* 316, e82 (2007)
65. D. Kechrakos , K. N. Trohidou , M. Vasilakaki. Magnetic properties of dense nanoparticle arrays with core/shell morphology, *JMMM* 316, e291 (2007)
66. D. Fiorani , L. Del Bianco , A. M. Testa and K.N. Trohidou. Exchange bias in disordered granular systems, *J. Phys. Cond. Matt.* **19**, 225007 (2007)
67. E. Winkler, R D Zysler, M. Vasquez Mansilla, D. Fiorani, D Rinaldi, M Vasilakaki and K N Trohidou Surface spin-glass freezing in interacting core-shell NiO nanoparticles. *Nanotechnology* **19**, 185702(2008)
68. M. Vasilakaki and K.N. Trohidou. Surface effects on the magnetic behaviour of nanoparticles with core/shell morphology, *J. Phys. D: Appl. Phys.* **41** 134006 (2008)
69. M. Vasilakaki, E. Eftaxias, K.N. Trohidou. Monte Carlo study of the exchange bias and the training effect in nanoparticles with core/shell morphology. *Phys. Status Solidi* **A205**, p1865(2008)
70. G. Salazar-Alvarez, J. Qin, V. Šepelák, I. Bergmann, M. Vasilakaki, K.N. Trohidou, J.D. Ardisson, W.A.A. Macedo, M. Mikhaylova, M. Muhammed, M.D. Baró, J. Nogués. Cubic versus Spherical Magnetic Nanoparticles: The Role of Surface Anisotropy. *J. Am. Chem. Soc.* **130**, p13234 (2008)
71. D. Kechrakos and K.N. Trohidou. Dipolar interaction effects in the magnetic and magnetotransport properties of ordered nanoparticle arrays. *Journal of Nanoscience and Nanotechnology* **8**, p2929(2008)
72. A. Lipinska , C Simserides , KN. Trohidou, and T. Dietl. Ferromagnetic properties of p-(Cd,Mn)Te quantum wells: Interpretation of magneto-optical measurements by Monte Carlo simulations. *Phys. Rev.* **B79**, 235322 (2009).
73. M. Vasilakaki, KN Trohidou. Numerical study of the exchange-bias effect in nanoparticles with ferromagnetic core/ferrimagnetic disordered shell morphology. *Phys. Rev.* **B79**, 144402 (2009)
74. C Simserides, A Lipinska, KN Trohidou, T Dietl: Reducing influence of antiferromagnetic interactions on ferromagnetic properties of p-(Cd,Mn)Te quantum wells. *Physica E-Low-Dimensional Systems & Nanostructures* **42**, p2694(2010).

75. C. Binns, N. Domingo, A. M. Testa, D. Fiorani, K. N. Trohidou, M. Vasilakaki, J. A. Blackman, A. M. Asaduzzaman, S. Baker, M. Roy, D. Peddis, Interface exchange coupling in Co nanoparticles dispersed in a Mn matrix *J. Phys: Condensed Matter*, **22** , 436005 (2010).
76. KN Trohidou, M. Vasilakaki. Magnetic Behaviour of Core/Shell Nanoparticle Assemblies: Interparticle Interactions Effects. *Acta Phys. Polonica A* Volume: **117** p374(2010).
77. V. Iannotti, S. Amoroso, G Ausanio, X. Wang, L. Lanotte, AC Barone, G Margaris, KN Trohidou, D. Fiorani. Interplay between particle anisotropy and exchange interaction in Fe nanoparticle films *Phys. Rev. B* **83**, 214422 (2011).
78. G. Margaris, K. Trohidou, H. Kachkachi, Surface effects on the magnetic behavior of nanoparticle assemblies, *Phys. Rev. B* **85**, 024419 (2012)
79. K. N. Trohidou, M. Vasilakaki, D. Peddis, D. Fiorani, Memory Effects in Ultra-Small CoFe_2O_4 Nanoparticles, *IEEE Transactions on Magnetics* **48**, p1305(2012)
80. M. Sawicki, T. Devillers, S. Galeski, C. Simseridis, S. Dobkowska, B. Faina, A. Crois, A. Navarro-Quezada, K. N. Trohidou, J. A. Majewski, T. Dietl, A. Bonanni, Origin of low-temperature magnetic ordering in $\text{Ga}_{1-x}\text{Mn}_x\text{N}$ *Phys. Rev. B* **85**, 205204(2012)
81. G. Margaris, K. N. Trohidou, J. Nogues, Mesoscopic Model for the Simulation of Large Arrays of Bi-Magnetic Core/Shell Nanoparticles, *Advanced Materials*, Volume: **24** Issue: **31**, **4331** (2012) .
82. A. López-Ortega, M. Estrader, G. Salazar-Alvarez, S. Estradé, I. V. Golosovsky, R. K. Dumas, D. J. Keavney, M. Vasilakaki, K. N. Trohidou, J. Sort, F. Peiró, S. Suriñach, M. D. Baró and J. Nogués. Strongly exchange coupled inverse ferrimagnetic soft/hard, $\text{Mn}_x\text{Fe}_{3-x}\text{O}_4|\text{Fe}_x\text{Mn}_{3-x}\text{O}_4$, core/shell heterostructured nanoparticles. *Nanoscale* Volume: **4** Issue: **16**,: **5138** (2012)
83. G. Margaris, KN Trohidou, V. Iannotti.; G. Ausanio, L. Lanotte, D. Fiorani. Magnetic behavior of dense nanoparticle assemblies: Interplay of interparticle interactions and particle system morphology. *Phys. Rev. B* **86** Issue: **21** Art. N: **214425** (2012)
84. V. Iannotti, S Amoroso, G. Ausanio, R. Bruzzese, L. Lanotte, AC Barone, G. Margaris, KN Trohidou, D. Fiorani. Stepwise behaviour of magnetization temperature dependence in iron nanoparticle assembled films. *Nanotechnology* vol 24, 165706 (2013)
85. S. Stefanowicz, G Kunert, C. Simserides, JA Majewski, W. Stefanowicz, C Kruse, S. Figge, T. Li, R. Jakiela, KN Trohidou, A Bonanni, D. Hommel, M. Sawicki, T. Dietl. Phase diagram and critical behavior of the random ferromagnet $\text{Ga}_{1-x}\text{Mn}_x\text{N}$. *Phys Rev B* **88**, 081201(2013)
86. M. Vasilakaki, K.N. Trohidou, D. Peddis, D. Fiorani, R Mathieu, M. Hudl, P. Nordblad, C. Binns S. Baker, S. Memory effects on the magnetic behavior of assemblies of nanoparticles with ferromagnetic core/antiferromagnetic shell morphology. *Phys. Rev B* **88**, 140402 (2013)
87. Toni Uusimäki, Georgios Margaris, Kalliopi Trohidou, P. Granitzer, K. Rumpf, M. Sezen, G. Kothleitner. Three dimensional quantitative characterization of magnetite nanoparticles embedded in mesoporous silicon: local curvature, demagnetizing factors and magnetic Monte Carlo simulations. *Nanoscale* **5**, p11944(2013).
88. Athanasia Kostopoulou, Konstantinos Brintakis, Marianna Vasilakaki, Kalliopi Trohidou, Alexios P. Douvalis, Alessandro Lascialfari, Liberato Manna and Alexandros Lappas, Assembly-mediated Interplay of Dipolar Interactions and Surface Spin Disorder in Colloidal Maghemite Nanoclusters, *Nanoscale* **4**, 2014, Advance Article ,DOI: 10.1039/C3NR06103E
89. D. Peddis, M. Vasilakaki, K.N. Trohidou, D. Fiorani, *Dynamics in superspin glass systems*. *IEEE Transactions on Magnetics* **50**, art. No 6971627 (2014).
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