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APPENDIX I

REFEREED PUBLICATIONS

- Since 2000 a great deal of my disseminated research pertains to projects that are a major part of either a PhD or an MSc thesis supervised by myself and supported by external funds raised with my initiative. In addition, wherever there is a component of work pursued at large-scale facilities, I have been the principal investigator and main proposer that secured the beam time request.

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PATENT

A. Lappas, A. Kostopoulou, A. Lascialfari, F. Orsini, S.K.P. Velu, and K. Thangavel
“Ferrimagnetic Colloidal Nanoclusters of Maghemite for MRI applications”;
No. 20120100419, 07-08-2012, Greek Industrial Property Organization (OBI).

BROADER READERSHIP & OUTREACH / MEDIA COVERAGE

- *Newsroom*: “[Defects in Magnetic Nanoparticles May Improve Cancer Treatment](#)”, Alexandros Lappas’s collaboration with Brookhaven Lab Scientists (published in *Physical Review X*, 2019), is highlighted by the Lab’s media & communications office (February 2020).
- *Media/News*: our research published in the *Physical Review X* is highlighted with the title “[Innovative Therapies with Magnetic Nanocrystals - New Perspectives](#)” by the General Secretariat for Research and Technology (Greece), Newsletter #9, February 2020.
- *News outlets*: the published *Physical Review X* article has been highlighted in *Nanowerk*, as “[How Disorder in Nanocrystals Enables Heat-therapeutic Systems](#)” (24 Jan. 2020), and in *Phys.org*, as “[Researchers Explain How Disorder in Tiny Crystals Enables Heat-therapeutic Systems](#)” (24 Jan. 2020).
- *Press articles*: “[FORTH in the Battle Against Cancer](#)”, newspaper articles, at local ([Nea Kriti](#)) and national ([Kathimerini](#)) levels, showcasing Alexandros Lappas’s Lab research work, with socioeconomic impact (January 2020).
- *Press releases*: Alexandros Lappas was selected to receive a competitive U.S. Office of Naval Research Global (ONRG) [grant award](#). The achievement was announced at local ([NEAKRITI](#), [CRETALIVE](#), [PATRIS](#)) and national ([ERT](#), [DEFENCELINE](#), [MAXITISTHRAKIS](#)) media (October 2017).
- *Press releases*: “Alexandros Lappas, Recipient of a Fulbright Award”, Broadcasted on-line by Greek newsagents, including: [CRETALIVE](#); [CandiaNEWS](#); [EMPROS](#) (July 2016).
- *Research Highlights*: “[Alexandros Lappas, Research Director at FORTH, Receives a Prestigious Fulbright Award](#)”; FORTH’s web-site explains the theme of our research that has been recognized for its academic excellence by the Fulbright Foundation – Greece (May 2016).
- *Project*: “[Nanoclusters of Magnetic Nanoparticles as Multifunctional Agents for the Development of Biological Diagnostic and Therapeutic Applications](#)”; my team’s groundbreaking proposal (#16890 – Applied Research top 10) has been shortlisted in the “Greece Innovates” («Η ΕΛΛΑΣΑ KAINOTOMEΙ») [3rd Applied Research & Innovation Competition](#) (April 2015); our candidacy has received important coverage in a Sunday newspaper supplement (e.g. KATHIMERINI-K, 8.11.2015, #649, p. 52).
- *Article*: “[On the Inhomogeneous Ground State of a Triangular Antiferromagnet](#)” research at IESL-FORTH selected by the ESRF Directors of Research to be included in the *ESRF HIGHLIGHTS* (published by the European Synchrotron Radiation Facility), chapter in Materials Science, p. 118-119 (December 2014).
- *Article*: “[A Novel Magnetic Material in the First Line of Medical Diagnosis](#)” research at IESL-FORTH; in *Innovation, Research & Technology* (published by the National Documentation Centre – EKT), issue 96, p. 11 (June - August 2014).
- *Press release*: “[Magnetic Materials Pushing the Frontiers of Medical Diagnostics](#)”, R&D work with socio-economic impact (Jun 2014).
Broadcasted on-line by a number of Greek newsagents; e.g.:
[NEAKRITI](#): “[Nanomaterials improve magnetic tomography](#)”

Alexandros Lappas

- *Press release:* “[A Novel Inhomogeneous State of Matter](#)”, R&D work with impact on the understanding of fundamental physical mechanisms (Feb 2014).

Broadcasted on-line by Greek newsagents; e.g.:

EFSYN.GR: “[The matter in a new state of order](#)”

- *Monograph:* “[Good Things in Small Packages](#)” research in the nanoscale at IESL-FORTH; in *International Innovation* (published by Research Media Ltd), issue 1, pp. 28-30 (2011).

APPENDIX II

ORAL PRESENTATIONS & INVITED LECTURES

IUCr 2021 – 25th Congress of the International Union of Crystallography (Hybrid event); Microsymposium #45: “Frustrated Magnetic Order and Emerging Science”, Prague, Czech Republic, 14-22 August 2021.

A. Lappas, B.A. Frandsen, and E.S. Bozin

“Nanoscale Distortions and Ground State Selection in Geometrically Frustrated Magnets”

Acta Cryst. 2021, A77, C317.

18th International Conference on Nanosciences & Nanotechnologies (NN21) (Hybrid event); WS2: “Nanomagnetism”, Thessaloniki, Greece, 6-9 July 2021.

A. Lappas, G. Antonaropoulos, M. Vasilakaki, K.N. Trohidou, V. Iannotti, G. Ausanio, M. Abeykoon, I.K. Robinson, and E.S. Bozin

“Defect Tailored Nanoscale Magnetic Functionalities” - **INVITED**

E-MRS 2021 Spring Meeting (Virtual); Symposium S: “Substitution and Recycling of Critical Raw Materials in Optoelectronic, Magnetic and Energy Devices III”, Strasbourg, France, 31 May to 4 June 2021.

A. Lappas

“Tweaking Nanoscale Magnetism by Vacancy-induced Correlated Disorder” - **INVITED**

E-MRS 2021 Spring Meeting (Virtual); Symposium J: “Defect-induced Effects in Nanomaterials”, Strasbourg, France, 31 May to 4 June 2021.

A. Lappas, Antonaropoulos, M. Vasilakaki, K.N. Trohidou, V. Iannotti, G. Ausanio, M. Abeykoon, I.K. Robinson, and E.S. Bozin

“When Favorable Defects Tailor Nanoscale Magnetic Functionality”

2021 NSLS-II & CFN Users’ Meeting (Virtual); Workshop: “Structural Responses to Electronic Order in Quantum Materials from Total Scattering Approaches”, Brookhaven National Lab, Upton, USA, 20 May 2021.

A. Lappas

“Defect-mediated Optimal Nanoscale Magnetic Functionalities” - **INVITED**

2020 Joint European Magnetic Symposia (Virtual); Symposium 1: “Biomagnetism and Biomedical Applications”, Lisbon, Portugal, 7-11 December 2020.

A. Lappas, G. Antonaropoulos, M. Vasilakaki, K.N. Trohidou, V. Iannotti, G. Ausanio, I.K. Robinson, and E.S. Bozin

“Vacancy-induced Correlated Disorder in Colloidal Nanocrystals: a Favorable Tweaking Path for Magnetism-engineered Functionalities”

2020 Joint European Magnetic Symposia (Virtual); Symposium 15: “Strongly Correlated Systems and Frustrated and Disordered Magnetism”, Lisbon, Portugal, 7-11 December 2020.

A. Lappas, B.A. Frandsen, and E.S. Bozin

“Nanoscale Distortions and Ground State Selection in Geometrically Frustrated Magnets”

International Conference on Magnetic Materials and Applications (ICMAGMA-2018), NISER, Bhubaneswar, India, 9-13 December 2018.

A. Lappas

“Magnetism-engineered Iron-oxide Nanoclusters as Theranostic Vehicles” - **INVITED**

7th International Symposium on Transparent Conductive Materials (TCM 2018), Chania, Greece, 14-19 October 2018

Alexandros Lappas

A. Lappas

“Colloidal Nanocrystal Architectures with Coupled Magnetic and Optical Functionalities” - **INVITED**

12th International Conference on Physics of Advanced Materials (ICPAM-12), Heraklion, **Greece**, 22-28 September 2018.

A. Lappas

“Nanoscale Heterogeneity in Transition Metal Oxides” - **PLENARY SPEAKER**

European Congress and Exhibition on Advanced Materials and Processes (EUROMAT 2017); Symposium A2: “Innovations in Functional Nanomagnets”, Thessaloniki, **Greece**, 17-22 September 2017.

G. Antonaropoulos, K. Brintakis, E.S. Bozin, M. Abeykoon, G. Ausanio, V. Iannotti, K. Trohidou, and A. Lappas

“Deciphering the Workings of Magnetic Nanoparticles by Unraveling their Intricate Local Structure” - **HIGHLIGHT TALK**

European Congress and Exhibition on Advanced Materials and Processes (EUROMAT 2017); Symposium A5: “Colloidal Nanoparticles: Synthesis, Functionalization, and Applications”, Thessaloniki, **Greece**, 17-22 September 2017.

A. Lappas

“When Colloidal Nanocrystal Clusters Enable Multimodal Diagnosis and Therapy” - **HIGHLIGHT TALK**

European Congress and Exhibition on Advanced Materials and Processes (EUROMAT 2017); Symposium B5: “Advanced Ceramics”, Thessaloniki, **Greece**, 17-22 September 2017.

I. Bakaimi, R. Brescia, C.M. Brown, A. Tsirlin, M.A. Green, and A. Lappas

“Hydration-Induced Spin-glass State in a Frustrated Na-Mn-O Triangular Lattice”

APS March Meeting 2017, New Orleans, **USA**, 13-17 March 2017.

E.S. Bozin, M. Abeykoon, A. Lappas, Y.-S. Hor, J.F. Mitchell, and S.J.L. Billinge

“Local Orbital Fluctuations and t_{2g} Degeneracy Lifting in the Metallic Regime of the CuIr₂S₄”

Workshop “Nanostructure in the City”, Columbia University, New York, **USA**, 26 October, 2016.

A. Lappas

“Multicomponent Colloidal Nanocrystals: Where Structure Matters” - **INVITED**

11th International Conference on Physics of Advanced Materials (ICPAM-11), Cluj-Napoca, **Romania**, 8-14 September 2016.

A. Lappas

“Tailored Colloidal Nanocrystal Clusters of Iron-oxide for Diagnosis and Therapy” - **PLENARY SPEAKER**

The European Powder Diffraction Conference (EPDIC15); MicroSymposium: “Nanomaterials, Surfaces and Interfaces”, Bari, **Italy**, 12-15 June 2016.

A. Lappas

“Multicomponent Colloidal Nanocrystals: a Toolbox of Versatile Functionality” - **KEYNOTE SPEAKER**

E-MRS 2016 Spring Meeting; Symposium R: “Multifunctional Nanostructures for Diagnostic and Therapeutic of Diseases”, Lille, **France**, 2-6 May 2016.

A. Lappas

“Tailored Colloidal Nanocrystal Clusters Enable Strategies for Diagnosis and Therapy” - **INVITED**

TO-BE Spring Meeting 2016; MP1308 Cost Action “Towards Oxide-Based Electronics”, Warwick, **UK**, 6-8 April 2016.

E. Aza, A. Fernandez-Martinez, M. Ciomaga-Hatnean, G. Balakrishnan and A. Lappas

“Frustrated Two-dimensional Manganites: the Quest for Single Crystals”

Alexandros Lappas

TO-BE Spring Meeting 2016; MP1308 Cost Action “Towards Oxide-Based Electronics”, Warwick, UK, 6-8 April 2016.

A. Lappas, A. Zorko and D. Arčon

“Frustration-induced Nanoscale Inhomogeneity in a Triangular Spin Lattice”

18th Chemistry Postgraduates Conference; Symposium: “Nanotechnology & Nanosciences”, Heraklion, Greece, 26-27 March 2016.

A. Lappas

“Hybrid Nanocrystals: a Toolbox of Versatile Functionality” - **INVITED**

E-MRS 2015 Fall Meeting; Symposium W: “Nanoscale Phase Separations in Spintronic Materials, Superconductors, and Other Systems, Warsaw, Poland, 15-18 September 2015.

A. Lappas, A. Zorko and D. Arčon

“Frustration-induced Nanoscale Inhomogeneity in a Triangular Spin Lattice”

11th International Workshop on Magnetism and Superconductivity at the Nanoscale, Coma-ruga, Spain, 29 June - 3 July 2015.

A. Lappas

“Frustration-Induced Nanoscale Inhomogeneity in a Triangular Spin Lattice” - **INVITED**

Superstripes 2015, Ischia, Italy, 13 - 18 June 2015.

A. Lappas, A. Zorko, and D. Arčon

“Emergence of an Inhomogeneous State in a Triangular Antiferromagnet” - **INVITED**

Complex Magnetic Nanostructures (COMANA) International Workshop, Aegina, Greece, 2-5 June 2015.

A. Lappas

“Hierarchical Length-scale Interactions in Colloidal Maghemite Nanocrystal Clusters” - **INVITED**

Workshop on the European Spallation Source and the Opportunities Offered for Greek Participation, Athens, Greece, 9 December 2014.

A. Lappas - **INVITED**

“Quantum Materials and Magnetism: where Structure Matters”

30th Panhellenic Conference on Solid State Physics & Materials Science, Heraklion, Greece, 21-24 September 2014.

K. Brintakis, A. Kostopoulou, S. Psycharakis, A. Ranella, M. Vasilakaki, K.N. Trohidou, A.P. Douvalis, S.K.P. Velu, L. Bordonali, A. Lascialfari, D. Sakellari, K. Simeonidis, M. Angelakeris, I. Athanassakis, and A. Lappas,

“Maghemite Nanoclusters: A Promising Multifunctional Material for Biomedicine”

7th International Conference of the Hellenic Crystallographic Association & Current Trends in Structural Biology, Heraklion, Greece, 19-21 September 2014.

A. Lappas - **INVITED**

“Frustration-induced Structural Complexity: An Insight by Powder Diffraction”

International Symposium on Advanced Nanoporous and Nanostructures Materials, Heraklion, Greece, 3-4 September 2014.

A. Lappas

“Colloidal Magnetic Nanoclusters: From Photonic Crystals to Theranostics”

Superstripes 2014, Erice, Italy, 25-31 July 2014.

A. Lappas, A. Zorko, O. Adamopoulos, M. Komelj, D. Arčon, E. Aza, A.M. Abakumov, A.A. Tsirlin, I. Bakaimi, and G. Van Tendeloo - **INVITED**

“Spin-driven Ferroelectricity in Two-dimensional Manganites”

Alexandros Lappas

SPIE Photonics West: Colloidal Nanoparticles for Biomedical Applications, San Francisco, **USA**, 1-4 February **2014**.

A. Kostopoulou, K. Brintakis, A. Lascialfari, M. Angelakeris, M. Vasilakaki, K. Trohidou, A.P. Douvalis, S. Psycharakis, A. Ranella, L. Manna, and A. Lappas - **INVITED**

“Iron-oxide Colloidal Nanoclusters: from Fundamental Physical Properties to Diagnosis and Therapy”

2013 Joint European Magnetic Symposia, Rhodes, **Greece**, 25-30 August **2013**.

A. Zorko, M. Komelj, O. Adamopoulos, D. Arcon, and A. Lappas

“Magnetostructural Phase Separation Induced by Geometrical Frustration”

2013 Joint European Magnetic Symposia, Rhodes, **Greece**, 25-30 August **2013**.

K. Brintakis, A. Kostopoulou, M. Vasilakaki, K.N. Trohidou, and A. Lappas

“Maghemite Nanoclusters: Static, Dynamic Magnetic Properties and Monte Carlo Simulations”

2013 Joint European Magnetic Symposia, Rhodes, **Greece**, 25-30 August **2013**.

A. Kostopoulou, F. Thetiot, I. Tsiaouassis, M. Androulidaki, P.D. Cozzoli, and A. Lappas

“Interface-mediated Exchange-bias in Fluorescent ZnO-Fe@Fe_xO_y Colloidal Hybrid Nanocrystals”

8th International Conference on Fine Particle Magnetism, Perpignan, **France**, 24-27 June **2013**.

A. Kostopoulou, F. Thétiot, M. Androulidaki, A. Lappas, I. Tsiaouassis, and P.D. Cozzoli

“Interface-Engineered Fluorescent-Ferromagnetic ZnO-Fe@Fe_xO_y Nanocrystals”

Superstripes 2013, Ischia, **Italy**, 27 May - 1 June **2013**.

A. Zorko, O. Adamopoulos, M. Komelj, D. Arcon, and A. Lappas

“Frustration-Induced Magnetostructural Phase-Separation in a Triangular Spin Lattice” - **INVITED**

4th International Congress Nanotechnology, Medicine & Biology (BioNanoMed), Krems, **Austria**, 13-15 March **2013**.

A. Kostopoulou, A. Lappas, K. Brintakis, S. K. P. Velu, T. Kalaivani, F. Orsini, A. Lascialfari, A. P. Douvalis, D. Sakellari, K. Simeonidis, M. Angelakeris and L. Manna

“Colloidal Nanoclusters: from Materials Design to Theranostic Applications”

6th International Conference of the Hellenic Crystallographic Association, Athens, **Greece**, 28-29 September **2012**.

I. Bakaimi, O. Adamopoulos, C. Stock, M.A. Green, and A. Lappas

“Frustrated Manganese Oxide Systems: The Diversity of Crystal Structures Towards Novel Magnetic Behaviours”

2012 Joint European Magnetic Symposia, Parma, **Italy**, 9-14 September **2012**.

A. Kostopoulou, A. Lappas, K. Brintakis, A. Douvalis, S. Velu, K. Thangavel, F. Orsini, A. Lascialfari, D. Sakellari, K. Simeonidis, M. Angelakeris, and L. Manna

“Ferrimagnetic Maghemite Colloidal Nanocrystal Clusters: From Material Design to Imaging Hyperthermia Treatment”

2012 Joint European Magnetic Symposia, Parma, **Italy**, 9-14 September **2012**.

B. Kundys, A. Lappas, M. Viret, V. Kapustianyk, V. Rudyk, and C. Simon

“Order-Disorder Mediated Ferroelectricity in Dominantly Ferromagnetic Hybrid Organic-Inorganic Perovskites”

4th Workshop on Current Trends in Molecular and Nanoscale Magnetism, Ouranoupolis, **Greece**, 10-14 June **2012**.

A. Lappas - **INVITED**

“Ferrimagnetic Assemblies of Maghemite Nanocrystals as Effective MRI Contrast Enhancing Agents”

Alexandros Lappas

3rd International Conference on Superconductivity and Magnetism, Istanbul, Turkey, 29 April - 4 May 2012.

A. Lappas - INVITED

"Colloidal Nanocrystal Architectures with Coupled Magnetic and Optical Functionalities"

Wilhelm and Else Heraeus-Seminar: New Routes to Single-Phase Multiferroics, Bad Honnef, Germany, 23-25 April 2012.

B. Kundys, A. Lappas, M. Viret, V. Kapustianyk, V. Rudyk, S. Semak, Ch. Simon, and I. Bakaimi

"Hydrogen-bond Ordering Mediated Multiferroicity in Hybrid Organic Inorganic Perovskites"

19th Annual International Conference on Composites and Nano Engineering, Shanghai, China, 24-30 July 2011.

P. Li, A. Lappas, R. Lavieville, Y. Zhang, and R. Krahne

"Optoelectrical Properties of CdSe-Au Nanorod Networks"

19th Annual International Conference on Composites and Nano Engineering, Shanghai, China, 24-30 July 2011.

A. Lappas, A. Kostopoulou, F. Thetiot, I. Tsiaouassis, M. Androulidaki, and P.D. Cozzoli

"Exchange Bias in Hybrid Nanocrystals of Zinc Oxide"

5th European Conference on Neutron Scattering, Prague, Czech Republic, 17-22 July 2011.

M. Giot, C. Stock, L.C. Chapon, J. Androulakis, O. Adamopoulos, J. Taylor, P.G. Radaelli, C.M. Brown, M.A. Green, and A. Lappas

"Magnetic Order and Confined Excitations in the Spin-2 Triangular Lattice α -NaMnO₂"

8th International Conference on Nanosciences and Nanotechnologies, Thessaloniki, Greece, 12-15 July 2011.

A. Kostopoulou, K.P.V. Sabareesh, T. Kalaivani, A. Lascialfari, A.P. Douvalis, L. Manna, and A. Lappas

"Magnetic Colloidal Nanoclusters as MRI Contrast Agents"

Biomaterials and Bionanomaterials: Recent Advances and Safety-Toxicology Issues, Heraklion, Greece, 5-12 May 2011.

A. Kostopoulou, K.P.V. Sabareesh, T. Kalaivani, A. Lascialfari, A. Douvalis, L. Manna, and A. Lappas

"Development of Maghemite Colloidal Nanoclusters as MRI Contrast Agents"

4th North America - Greece - Cyprus Workshop on Paramagnetic Materials, Patras, Greece, 14-18 June 2011.

A. Lappas - INVITED

"Nanocrystal Architectures with Synergetic Magnetic and Optical Functionalities"

XXVI Panhellenic Conference on Solid State Physics & Materials Science, Ioannina, Greece, 26-29 September 2010.

I. Bakaimi, O. Adamopoulos, M.A. Green, C. Stock, and A. Lappas,

"Frustration and Induced Magnetoelectric Coupling in NaMnO₂ Polymorphs"

Distinction, for best oral presentation by the 1st author (PhD student).

XXVI Panhellenic Conference on Solid State Physics & Materials Science, Ioannina, Greece, 26-29 September 2010.

F. Thetiot, A. Kostopoulou, I. Tsiaouassis, M. Androulidaki, P.D. Cozzoli, and A. Lappas,

"Magnetic and Fluorescent ZnO/Iron Oxide Hybrid Nanocrystals"

Trends in Spintronics and Nanomagnetism, Lecce, Italy, 23-27 May 2010.

F. Thetiot, A. Kostopoulou, I. Tsiaouassis, M. Androulidaki, P.D. Cozzoli, and A. Lappas

"Coupled ZnO/Iron Oxide Fluorescent Ferromagnetic Nanocrystals"

Magnetic Resonance in Highly Frustrated Magnetic Systems, Kranjska Gora, Slovenia, 1-4 February 2010.

Alexandros Lappas

A. Lappas

"Muons see the Order in the Frustrated Spin-2 Triangular Lattice $\alpha\text{-NaMnO}_2$ "

9th FORTH Retreat, Loutra Kyllinis, Greece, 9-10 October 2009.

A. Lappas - INVITED

"Magnetically Responsive Photonic Nanocrystals"

Emerging Trends & Novel Materials in Photonics, Delphi, Greece, 7-9 October 2009.

A. Kostopoulou and A. Lappas

"Magneto-Optical Properties of Iron Oxide Nanoclusters"

XXV Panhellenic Conference on Solid State Physics & Materials Science, Thessaloniki, Greece, 20-23 September 2009.

A. Kostopoulou and A. Lappas,

"Magneto-Optical Properties of Iron Oxide Nanoclusters"

4th Conference of the Hellenic Crystallographic Association, Athens, Greece, 26-27 September 2008.

A. Lappas

"Order Against Frustration in Delafossite Triangular Lattices",

1st International Conference from Nanoparticles & Nanomaterials to Nanodevices & Nanosystems, Halkidiki, Greece, 15-19 June 2008.

A. Kostopoulou and A. Lappas,

"Syntheses and Characterization of Water Soluble Magnetic Nanoclusters"

5th International Conference "New Research Trends in Material Science" ARM-5, Sibiu, Romania, 5-7 September 2007.

A. Lappas, D. Perisinakis, D. Gray, E. Pomjakushina, and K. Conder - INVITED

"Ultrafast Photo-magnetic Control of Spins in Antiferromagnets"

2nd North America-Greece-Cyprus Workshop on Paramagnetic Materials, Syros, Greece, 18-21 June 2007.

M. Giot, A. Lappas, J. Androulakis, Laurent Chapon, M.A. Green, and C.M. Brown - INVITED

"Surprises in an Anisotropic Triangular Spin System"

3rd Conference of the Hellenic Crystallographic Association, Patras, Greece, 22-24 September 2006.

A. Lappas, O. Adamopoulos, J. Androulakis, A. Zorko, D. Arcon, H. Kageyama, V. Pomjakushin, and R. Ibberson

"Lattice distortions in the low-temperature phase of the frustrated two-dimensional spin gap system $\text{SrCu}_2(\text{BO}_3)_2$."

7th SINQ Users' Meeting, Paul Scherrer Institute, Villigen, Switzerland, 27 January 2005.

A. Lappas

"Correlated Electron Lattices under External Stimuli"

3rd Slovenian Workshop on Nanoscience and Nanotechnology (SLONANO 2004), Ljubljana, Slovenia, 21-22 October 2004.

A. Lappas, A. Zorko, E. Wortham, R.N. Das, E.P. Giannelis, P. Cevc, and D. Arcon

"Hybrid Manganese Perovskite Crystals for Poly(dimethylsiloxane) Nanocomposites: Morphology, Static Magnetic Properties and Pinned Solitons"

XX Pan-Hellenic Conference on Solid State Physics, Ioannina, Greece, 26-29 September 2004.

A. Lappas,

" $\text{M}[(\text{N}(\text{CN})_2)_2$ Routile Molecular Magnets: Three-dimensional Crystal Assembly and Controlled Properties"

21st European Crystallographic Meeting, Durban, S. Africa, 24-25 August 2003.

Alexandros Lappas

A. Lappas, C.J. Nuttall, and V. Pomjakushin

"Pressure Influence on Structure-Property Relations of Ternary Metal Chalcogenides"

1st African Neutron Diffraction Meeting (Modern Neutron Diffraction & Applications), Amanzingwe, Broederstroom, **S. Africa**, 21-22 August **2003**.

A. Lappas - INVITED

"Relations of Stoichiometry to Structure and Structure to Properties by Neutron Diffraction in Low-Dimensional Electronic Materials"

2003 MRS Spring Meeting, San Francisco, CA, **USA**, 21-25 April **2003**.

E. Wortham, A. Lappas, R.N. Das, E.P. Giannelis, A. Zorko, and D. Arcon

"Hybrid Perovskites for Polymer-Based Magnetically Active Nanocomposites"

19th Pan-Hellenic Chemistry Conference, Heraklion, **Greece**, 6-10 November **2002**.

E. Wortham, A. Zorko, D. Arcon, R.N. Das, E.P. Giannelis, and A. Lappas,

"Two-Dimensional Magnetism in Hybrid Perovskite Nanocomposites"

9th International Conference on Muon Spin Rotation/ Relaxation/ Resonance, Williamsburg, VA, **USA**, 3-7 June **2002**.

A. Lappas, A. Schenck, and K. Prassides,

"Spin-Freezing in the S=1/2 Two-Dimensional Spin-Gap Systems SrCu_{2-x}Mg_x(BO₃)₂ (x=0, 0.04, 0.12)"

XVI Pan-Hellenic Conference on Solid State Physics, Nafplio, **Greece**, 17-20 September **2000**.

A. Lappas, B. Alexandrakis, J. Giapintzakis, I. Maurin, K. Prassides, and A. Schenck,

"Spin-Vacancy Induced Magnetic Ordering and μ^+ SR Spectroscopy in Low-Dimensional Quantum Spin Systems"

European Research Conference: Chemistry and Physics of Multifunctional Materials, San Feliu de Guixols, **Spain**, 21-26 September **1999**.

A. Lappas and K. Prassides,

"C₆₀ Bonding Interactions in Small Lattice Constant Alkali Fullerides"

Organised by the European Science Foundation; F. Zerbetto (Bologna, Italy) and W.-J. Buma (Amsterdam, The Netherlands).

Nanotechnology in Carbon and Related Materials, University of Sussex, Brighton, **UK**, 9-11 September **1998**.

A. Lappas, S. Margadonna, C.M. Brown, K. Kordatos, and K. Prassides,

"Magnetism and Dynamics in (NH₃)K₃C₆₀"

Organised by M. Heggie, M. Terrones, and P. Minshall on behalf of the British Carbon Group.

XIII Pan-Hellenic Conference on Solid State Physics, Perea, Thessaloniki, **Greece**, 21-23 September **1997**.

A. Lappas, M. Kosaka, K. Tanigaki and K. Prassides,

"Phase Transitions and Orientational Order of C₆₀ Molecules in A₁C₆₀ Alkali Fullerides",

XII Pan-Hellenic Conference on Solid State Physics, Heraklion, Crete, **Greece**, 15-18 September **1996**.

Alexandros Lappas and Kosmas Prassides,

"Electronic Structure and Magnetism in Superconducting (HIGH-T_c) Copper Oxides",

187th Meeting of the Electrochemical Society, Reno, **USA**, 21-26 May **1995**.

A. Lappas, M. Kosaka, K. Tanigaki, and K. Prassides,

"Orientational Order in AC₆₀ Alkali Fullerides"

International Winterschool on Electronic Properties of Novel Materials: Fullerides and Fulleroids, Kirchberg, **Austria**, 5-12 March **1995**.

A. Lappas, K. Prassides, D. Arcón, R. Blinc, A. Schenck, and C.S. McMenamin - INVITED

Alexandros Lappas

"Spontaneous Magnetic Ordering in the Charge-Transfer Salt (TDAE)C₆₀"

AWARDED PRESENTATIONS

1998: First prize for best oral presentation in a *NATO Advanced Study Institute on: Muon Science*, (University of St. Andrews, St. Andrews, UK, 17-28 July 1998); NATO ASI/Scottish Universities Summer Schools in Physics (*SUSSP51*).

1996: First prize for best oral presentation in the *XII Pan-Hellenic Conference on Solid State Physics* (Heraklion, 15-18 September 1996); Condensed Matter Science and Technology Council, GREECE.

RESEARCH SEMINARS AT UNIVERSITIES & RESEARCH CENTRES (AFTER INVITATION)

Department of Chemistry, Northwestern University, Evanston, USA; December 2016.

"When Colloidal Nanocrystal Clusters Enable Multimodal Diagnosis and Therapy"

National Synchrotron Light Source II, Brookhaven National Laboratory, Upton, USA; December 2016.

"A Total Scattering Study of Multicomponent Iron-oxide Nanocrystals", **Friday Lunchtime Seminar Series**.

Condensed-Matter Physics & Materials Science Division, Brookhaven National Laboratory, Upton, USA; December 2016.

"Complexity in Spin-frustrated Rock-salt Manganites", **CMP-MS Seminar Series**.

Spallation Neutron Source, Oak Ridge National Laboratory, Oak Ridge, USA; November 2016.

"Complexity in Spin-frustrated Rock-salt Manganites", **Neutron Sciences Directorate Seminar**.

Materials Science Division, Lawrence Berkeley Lab, Berkeley, USA; November 2016.

"Tailored Colloidal Nanocrystal Clusters of Iron-oxide for Diagnosis and Therapy", **ALS/CXRO Seminar Series**.

National High Magnetic Field Laboratory, Tallahassee, USA; October 2016.

"Frustration-induced Structural Complexity in Layered Rock-salt Manganites"

Department of Physics, Florida International University, Miami, USA; October 2016.

"Tailored Colloidal Nanocrystal Clusters of Iron-oxide for Diagnosis and Therapy"; **Colloquium**.

Department of Physics, University of Columbia, New York, USA; October 2016.

"Frustration-induced Structural Complexity in Rock-Salt Manganites with Triangular Topology"

School of Physical Sciences, University of Kent, Canterbury, UK; February 2016.

"Frustration-induced Nanoscale Inhomogeneity in a Triangular Spin Lattice"; **Colloquium**.

ISIS Facility, STFC Rutherford Appleton Laboratory, Harwell, UK; February 2016;

"Frustration-induced Nanoscale Inhomogeneity in a Triangular Spin Lattice"

Institut Charles Gerhardt Montpellier, Université de Montpellier, Montpellier, France; November 2015;

"Tailored Colloidal Nanocrystal Clusters of Iron-oxide for Diagnosis and Therapy"; **Colloquium**.

Department of Physics, University of Bath, Bath, UK; July 2015.

"Colloidal Nanocrystals: A Toolbox of Versatile Functionality"; **Colloquium**.

Institute of Chemical Engineering Sciences, FORTH, Patras, Greece; May 2015.

"Colloidal Nanocrystals: A Toolbox of Versatile Functionality"; **Colloquium**.

Alexandros Lappas

Department of Physics and Astronomy, Stony Brook University, Stony Brook, NY, USA; June 2014.
"Frustration-induced Phase Separation in a Triangular Spin Lattice"

Center for Functional Nanomaterials, Brookhaven National Laboratory, Upton, NY, USA; June 2014.
"Iron-oxide Colloidal Nanoclusters: Interaction Mechanisms and Theranostics"

Condensed-Matter Physics & Materials Science Division, Brookhaven National Laboratory, Upton, NY, USA; June 2014.

"Frustration-induced Phase Separation and Magnetoelectric Effects in a Triangular Spin Lattice"

The Molecular Foundry, Lawrence Berkeley National Laboratory, Berkeley, USA; February 2014.
"Properties and Applications of Surface-stabilized Iron-oxide Magnetic Nanoclusters"

Key Laboratory of Transparent Opto-Functional Inorganic Materials Crystal Research Center, Shanghai Institute of Ceramics, Shanghai, China; July 2011.
"Magnetism at Different Length Scales"

Center for Optoelectronics Materials and Devices, Department of Physics, Zhejiang Sci-Tech University, Xiasha Higher Education Zone, Hangzhou, China; July 2011.
"Magnetism at Different Length Scales"

NIST Center for Neutron Research, 100 Bureau Drive, Gaithersburg, USA; November 2006.

"Low-temperature topotactic intercalation of a metallic dense host matrix chalcogenide: structural and electronic properties of $\text{Li}_x\text{Mo}_2\text{SbS}_2$ ($0 \leq x < 0.7$)"

Centre for Science at Extreme Conditions, The University of Edinburgh, Mayfield Rd., Edinburgh, UK; June 2006.

"Intercalation Reactions: Tailoring Geometric and Electronic Structure"

Department of Physics, University of Crete, Heraklion, Greece; March 2005.

"Probing the Ingredients of Magnetism in Molecule-Based Materials"

ISIS Neutrons and Muons Division, Rutherford Appleton Laboratory, Chilton, Didcot, UK; January 2005.
"Can we Make Magnets from Molecules"

Department of Materials Science and Technology, University of Ioannina, Ioannina, Greece; December 2003.

"Nanoporous Manganese Oxides for Magnetic and Cathodic Materials"

Department of Materials Science and Technology, University of Ioannina, Ioannina, Greece; October 2001.
"Crystal Structure and Magnetism in Low-dimensional $\text{PbNi}_{2-x}\text{A}_x\text{V}_2\text{O}_8$ ($\text{A} = \text{Mg}^{2+}, \text{Co}^{2+}$) Compounds"

Institute of Materials Science, National Centre for Scientific Research - DEMOKRITOS, Athens, Greece; March 2001.

"Magnetic Correlations in Low-Dimensional Spin Systems"

Institute of Electronic Structure and Laser, Foundation for Research & Technology, Heraklion, Crete, Greece; September 2000 / 1st Workshop on Collaborative Actions in Computational Materials Science.
"Spin-Vacancy Induced Magnetism in Low-Dimensional Quantum Spin Systems"

School of Chemistry, Physics and Environmental Sciences, University of Sussex, Falmer, Brighton, UK; September 1998.

Alexandros Lappas

"Synthesis and Characterisation of Superconducting / Magnetic Fullerene-Based Materials

Institute of Electronic Structure and Laser, Foundation for Research & Technology, Heraklion, Crete, Greece; January 1996.

"Structural and Magnetic Instabilities in Layered Copper Oxides and Fulleride Salts"

Department of Chemistry, University of Crete, Heraklion, Crete, Greece; December 1995.

"Aspects of Modern Materials: Interplay of Magnetism and Superconductivity in Layered Copper Oxides and Novel Magnetic Phase-Changes in Fullerine Intercalation Compounds"

School of Chemistry & Molecular Sciences, University of Sussex, Falmer, Brighton, UK; March 1993.

"Muon Spin Relaxation (μ^+SR) in Layered Cuprate Systems"

School of Chemistry & Molecular Sciences, University of Sussex, Falmer, Brighton, UK; November 1992.

"Neutron Scattering Studies of High-T_c Related Complex Oxides"

APPENDIX III

CONFERENCE PAPERS IN SPECIAL VOLUMES

- [13] A. Kostopoulou, K. Brintakis, A. Lascialfari, M. Angelakeris, M. Vasilakaki, K. Trohidou, A.P. Douvalis, S. Psycharakis, A. Ranella, L. Manna, and A. Lappas
"Iron-oxide Colloidal Nanoclusters: from Fundamental Physical Properties to Diagnosis and Therapy"
Proceedings of the SPIE – Progress in Biomedical Optics and Imaging, Vol. 8955, **2014**, 895517 (10 pp).
DOI: 10.1117/12.2039264
- [12] I. Bakaimi, A. Abakumov, M.A. Green, and A. Lappas
"Crystal, Magnetic and Dielectric Studies of the 2D Antiferromagnet: β -NaMnO₂"
Proceedings of the SPIE – The International Society for Optical Engineering, Vol. 8987, **2014**, 898716 (7 pp).
DOI: 10.1117/12.2036937
- [11] E. Kasotakis, A. Kostopoulou, M. Spuch-Calvar, M. Androulidaki, N.T. Pelekanos, A.G. Kanaras, A. Mitraki, and A. Lappas
"Thin Film Mesoscale Organization of Nanoparticles by using Biomolecular Peptide Tools"
Proceedings of the SPIE – Progress in Biomedical Optics and Imaging, Vol. 8955, **2014**, 89551W (8 pp).
DOI: 10.1117/12.2048292
- [10] P. Li, A. Lappas, R. Lavieville, Y. Zhang, and R. Krahne
"Optoelectrical Properties of CdSe-Au Nanorod Networks"
World Journal of Engineering, 8 [Suppl. 1], **2011**, 669.
- [9] A. Lappas, A. Kostopoulou, F. Thetiot, I. Tsiaouassis, M. Androulidaki, and P.D. Cozzoli
"Exchange Bias in Hybrid Nanocrystals of Zinc Oxide"
World Journal of Engineering, 8 [Suppl 1], **2011**, 651.
- [8] A. Kostopoulou, I. Tsiaouassis, and A. Lappas,
"Magneto-optical Properties of Iron Oxide Nanoclusters"
in *Emerging Trends and Novel Materials in Photonics*, Eds.: N.A. Vainos, S. Pissadakis, S. Couris, E. Paspalakis, and I. Koutselas, American Institute of Physics, Melville, NY; CP 1288, **2010**, 26-29.
- [7] A. Lappas, E. Aslanis, K. Prassides, A.N. Fitch, and M. Hanfland,
"Low Symmetry Structures in the Li-Rb-C₆₀ Phase Field"
in *Electronic Properties of Novel Materials: Science and Technology of Molecular Nanostructures*, Eds.; H. Kuzmany, J. Fink, M. Mehring, and S. Roth, American Institute of Physics, Woodbury, NY; CP 486, **1999**, 52-55.
- [6] S. Margadonna, C.M. Brown, K. Kordatos, A. Lappas, K. Prassides, M. Kosaka, and K. Tanigaki,
"Structural Studies of Sodium and Lithium Fullerides"
in *Recent Advances in the Chemistry and Physics of Fullerenes and Related Materials*, Eds.; K.M. Kadish and R.S. Ruoff, Electrochemical Society, Pennington, NJ, Vol. VI, **1998**, 650-658.
- [5] S. Margadonna, C.M. Brown, A. Lappas, K. Kordatos, K. Tanigaki, and K. Prassides,
"Fulleride Polymerisation at Ambient and Elevated Pressure"
in *Electronic Properties of Novel Materials: Molecular Nanostructures*, Eds.; H. Kuzmany, J. Fink, M. Mehring, and S. Roth, American Institute of Physics, Woodbury, NY; CP 442, **1998**, 327-330.
- [4] M. Terrones, J.P. Hare, K. Hsu, H.W. Kroto, A. Lappas, W.K. Maser, A.J. Pierik, K. Prassides, R. Taylor, and D.R.M. Walton,
"Physico-Chemical Studies on Nanotubes and their Encapsulated Compounds"

Alexandros Lappas

in *Recent Advances in the Chemistry and Physics of Fullerenes and Related Materials*, Eds.; K.M. Kadish and R.S. Ruoff, Electrochemical Society, Pennington, NJ, Vol. II, **1995**, 599-620.

[3] A. Lappas, M. Kosaka, K. Tanigaki, and K. Prassides,
"Orientational Order in AC₆₀ Alkali Fullerides"

in *Recent Advances in the Chemistry and Physics of Fullerenes and Related Materials*, Eds.; K.M. Kadish and R.S. Ruoff, Electrochemical Society, Pennington, NJ, Vol. II, **1995**, 1071-1082.

[2] K. Prassides, A. Lappas, W. Maser, I. Hirosawa, K. Tanigaki, and J. Mizuki,
"Orientational Disorder in Ternary Lithium Fullerides"

in *Recent Advances in the Chemistry and Physics of Fullerenes and Related Materials*, Eds.; K.M. Kadish and R.S. Ruoff, Electrochemical Society, Pennington, NJ, Vol. I, **1994**, 530-545.

[1] A. Lappas, K. Prassides, D. Arcón, R. Blinc, A. Schenck, and C.S. McMenamin,
"Spontaneous Magnetic Ordering in the Charge-Transfer Salt (TDAE)C₆₀"

in *Electronic Properties of Novel Materials: Physics and Chemistry of Fullerenes and Derivatives*, Eds.; H. Kuzmany, J. Fink, M. Mehring, and S. Roth, World Scientific, Singapore, **1995**, 480-484.

PAPERS IN SPECIAL VOLUMES OF GREEK CONFERENCES

[4] E. Wortham, A. Zorko, D. Arcon, R.N. Das, E.P. Giannelis, and A. Lappas,
"Two-Dimensional Magnetism in Hybrid Perovskite Nanocomposites"
19th Pan-Hellenic Chemistry Conference, Heraklion, **Greece**, 6-10 November **2002**.
Conference Proceedings, pp 728-731.

[3] A. Lappas, B. Alexandrakis, J. Giapintzakis, I. Maurin, K. Prassides, and A. Schenck,
"Spin-Vacancy Induced Magnetic Ordering and μ⁺SR Spectroscopy in Low-Dimensional Quantum Spin Systems"
XVI Pan-Hellenic Conference on Solid State Physics, Nafplio, **Greece**, 17-20 September **2000**.
Conference Proceedings, pp 14-17.

[2] A. Lappas, M. Kosaka, K. Tanigaki and K. Prassides,
"Phase Transitions and Orientational Order of C₆₀ Molecules in A₁C₆₀ Alkali Fullerides",
XIII Pan-Hellenic Conference on Solid State Physics, Perea, Thessaloniki, **Greece**, 21-23 September **1997**.
in Conference Proceedings.

[1] A. Lappas and K. Prassides,
"Electronic Structure and Magnetism in Superconducting (HIGH-T_c) Copper Oxides",
XII Pan-Hellenic Conference on Solid State Physics, Heraklion, Crete, **Greece**, 15-18 September **1996**.
in Conference Proceedings.

POSTER PRESENTATIONS

➤ These are contributions made by postgraduate students and postdoctoral fellows supervised in my team.

International Conference on Magnetic Materials and Applications (ICMAGMA-2018), NISER, Bhubaneswar, **India**, 9-13 December **2018**.

F. Orlandi, E. Aza, A. Zorko, D. Arcon, A. Abakumov, P. Manuel, M.A. Green, and A. Lappas
"Spin-frustrated Rock-salt Manganites and their Topologically Correlated Degrees of Freedom"

Alexandros Lappas

*European Congress and Exhibition on Advanced Materials and Processes (EUROMAT 2017); Symposium A5: “Colloidal Nanoparticles: Synthesis, Functionalization, and Applications”, Thessaloniki, **Greece**, 17-22 September 2017.*

A. Kostopoulou, M. Sygletou, K. Brintakis, A. Lappas, and E. Stratakis
“Low-temperature Benchtop-Synthesis of All-inorganic Perovskite Nanowires”

*11th International Conference on Physics of Advanced Materials (ICPAM-11), Cluj-Napoca, **Romania**, 8-14 September 2016.*

E. Aza, I. Bakaimi, A. Zorko, D. Arcon, A.M. Abakumov, and A. Lappas,
“Magnetic Frustration and Polymorphism in Layered Rock-salt Manganites”

*The European Powder Diffraction Conference (EPDIC15); MicroSymposium: “Neutron Structural and Magnetic Scattering”, Bari, **Italy**, 12-15 June 2016.*

A. Lappas, E. Aza, E. Bozin, A. Zorko, D. Arcon, A.M. Abakumov, M. Ciomaga Hatnean, and G. Balakrishnan
“Frustration-induced Structural Complexity in Layered Rock-slat Manganites”

*E-MRS 2016 Spring Meeting; Symposium CC: “In situ Studies of Functional Nano-materials at Large Scale Facilities: from Model Systems to Applications”, Lille, **France**, 2-6 May 2016.*

G. Antonaropoulos, K. Brintakis, E.S. Bozin, M. Abeykoon, G. Ausanio, V. Iannotti, and A. Lappas
“Deciphering the Workings of Magnetic Nanoparticles by Unraveling their Local Structure”

*European Molecular Imaging Meeting (EMIM) 2016, “Imaging Probes, Chemistry & Reporter Genes: Novel concepts and probes for MRI”, Utrecht, **Netherlands**, 8-10 March 2016.*

A. Kostopoulou, K. Brintakis, and A. Lappas
“Tailored Colloidal Nanocrystal Clusters for Diagnosis and Therapy”

*2015 European School of Magnetism, Cluj-Napoca, **Romania**, 24 August - 4 September 2015.*

E. Aza, A. Lappas, A.M. Abakumov, I. Bakaimi, B. Klemke, K. Kiefer, G. Balakrishnan and M. Ciomaga-Hatnean
“Frustration and Coupled Properties in Two-dimensional Manganites”

*QualityNano Conference and Training Workshop, Heraklion, **Greece**, 15-17 July 2015.*

G. Antonaropoulos, K. Brintakis, E. Aza, A. Fernandez-Martinez, A. Kostopoulou, and A. Lappas
“Structure and Function Correlations in Hybrid Nanocrystals”

*20th International Conference on Magnetism, Barcelona, **Spain**, 5-10 July 2015.*

K. Brintakis, A. Kostopoulou, M. Vasilakaki, K.N. Trohidou, A. Ranella, I. Athanassakis, M. Angelakeris, A. Lascialfari, A.P. Douvalis and A. Lappas,
“Maghemite Nanocrystal Clusters for MRI Diagnosis & Hyperthermia Medical Treatment”
Distinction, Best Poster of the day (http://www.icm2015.org/best_posters_thursday.html).

11th International Workshop on Magnetism and Superconductivity at the Nanoscale, Coma-ruga, Spain, 29 June - 3 July 2015.

A. Kostopoulou, K. Brintakis, and A. Lappas,
“Hierarchical Length-scale Interactions in Colloidal Nanocrystal Clusters”

*30th Panhellenic Conference on Solid State Physics & Materials Science, Heraklion, **Greece**, 21-24 September 2014.*

G. Antonaropoulos, K. Brintakis, A. Kostopoulou, and A. Lappas,
“Shaping Core-Shell Iron Oxide Nanocrystals”

*30th Panhellenic Conference on Solid State Physics & Materials Science, Heraklion, **Greece**, 21-24 September 2014.*

Alexandros Lappas

E. Aza, I. Bakaimi, A.M. Abakumov, B. Klemke, K. Kiefer, and A. Lappas,
“Magnetoelectricity in Two-dimensional Manganites”

SPIE Photonics West: Colloidal Nanoparticles for Biomedical Applications, San Francisco, **USA**, 1-4 February **2014**.

E. Kasotakis, A. Kostopoulou, M. Spuch-Calvar, M. Androulidaki, N.T. Pelekanos, A.G. Kanaras, A. Mitraki, and A. Lappas

“Thin Film Mesoscale Organization of Nanoparticles by using Biomolecular Peptide Tools”

SPIE Photonics West: Oxide-based Materials and Devices V, San Francisco, **USA**, 2-5 February **2014**.

I. Bakaimi, A. Abakumov, M.A. Green, and A. Lappas

“Crystal, Magnetic and Dielectric Studies of the 2D Antiferromagnet: beta-NaMnO₂”

8th International Conference on Fine Particle Magnetism, Perpignan, France, 24-27 June **2013**.

K. Brintakis, A. Kostopoulou, A. Lappas, S.K.P. Velu, T. Kalaivani, F. Orsini, A. Lascialfari, A.P. Douvalis,

M. Vasilakaki, K.N. Trohidou, L. Manna, D. Sakellari, K. Simeonidis, and M. Angelakeris

“Magnetic Nanoclusters as a Theranostic Agent”

2012 Joint European Magnetic Symposia, Parma, **Italy**, 9-14 September **2012**.

K. Brintakis, A. Kostopoulou, A. Douvalis, A. Lappas

“Interparticle Interactions and Spin-glass Behaviour in Colloidal Maghemite Nanocrystal Clusters”

2012 Joint European Magnetic Symposia, Parma, **Italy**, 9-14 September **2012**.

O. Adamopoulos, A. Lappas, A. Zorko, D. Arcon, C. Stock, M. Green

“Frustration and Inhomogeneous Magnetism in the Spin-2 Anisotropic Triangular Lattice System a-NaMnO₂”

20th International Conference on Soft Magnetic Materials, Kos, **Greece**, 18-22 September **2011**.

D. Sakellari, E. Mirovalli, K. Simeonidis, A. Kostopoulou, K. Brintakis, A. Lappas, and M. Angelakeris

“Bottom up Approach to Magnetic Hyperthermia Agents: from Maghemite Nanoparticles to Large Ferrimagnetic Nanoclusters”

8th International Conference on Nanosciences and Nanotechnologies, Thessaloniki, **Greece**, 12-15 July **2011**.

A. Kostopoulou, F. Thetiot, I. Tsiaoussis, M. Androulidaki, P.D. Cozzoli, and A. Lappas

“Interfaces as a Means to Engineer Multifunctionality: Magnetic-Fluorescent ZnO Hybrid Nanocrystals”

XXVI Panhellenic Conference on Solid State Physics & Materials Science, Ioannina, **Greece**, 26-29 September **2010**.

K. Brintakis, A. Kostopoulou, and A. Lappas,

“Synthesis and Characterisation of Iron Oxide Magnetic Nanocrystals”

9th FORTH Retreat, Loutra Kyllinis, **Greece**, 9-10 October **2009**.

A. Kostopoulou, J. Tsiaousis, F. Thetiot, E. Snoeck, and A. Lappas,

“Magneto-optical Properties of Iron Oxide Nanoclusters”

Emerging Trends & Novel Materials in Photonics, Delphi, **Greece**, 7-9 October **2009**.

F. Thetiot, A. Kostopoulou, I. Tsiaoussis, M. Androulidaki, D. Cozzoli, and A. Lappas,

“Magnetic-Fluorescent Hybrid Nanocrystals of Zinc Oxide”

XXV Panhellenic Conference on Solid State Physics & Materials Science, Thessaloniki, **Greece**, 20-23 September **2009**.

K. Brintakis, A. Kostopoulou, and A. Lappas,

“Fe₃O₄@Au Core-Shell Nanocrystals: Magnetic and Optical Properties”

Alexandros Lappas

XXV Panhellenic Conference on Solid State Physics & Materials Science, Thessaloniki, **Greece**, 20-23 September **2009**.

A. P. Douvalis, A. Kostopoulou, A. Lappas and T. Bakas,
"Structural and Magnetic Properties of Colloidal Iron Oxide Magnetic Nanoclusters"

Theoretical and Experimental Magnetism Meeting, Abingdon, **UK**, 2-3 July **2009**.

A. Lappas, C. Stock, L.C. Chapon, O. Adamopoulos, M. Giot, J.W. Taylor, M.A. Green, C.M. Brown, and P.G. Radaelli,
"Order Against Frustration in the spin-2 Triangular Lattice System NaMnO₂"

XXIV Pan-Hellenic Conference on Solid State Physics, Heraklion, **Greece**, 21-24 September **2008**.

A. Kostopoulou, and A. Lappas,
"Ordered Structures of Water Soluble Magnetic Nanoclusters"

XXIV Pan-Hellenic Conference on Solid State Physics, Heraklion, **Greece**, 21-24 September **2008**.

O. Adamopoulos, and A. Lappas,
"Study of the NaMnO₂ Triangular Lattice System at High Temperature"

XXIV Pan-Hellenic Conference on Solid State Physics, Heraklion, **Greece**, 21-24 September **2008**.

K. Brintakis, A. Kostopoulou, G. Konstantinidis, T. Kostopoulos, Z. Hatzopoulos, and A. Lappas,
"Electrical Properties of Single Metallic Nanocrystals"

XXIV Pan-Hellenic Conference on Solid State Physics, Heraklion, **Greece**, 21-24 September **2008**.

K. Palotás, A.N. Andriotis, and A. Lappas,
"Theoretical Studies on Bare and Gold Covered Iron-oxide Nanocrystals"

XXIV Pan-Hellenic Conference on Solid State Physics, Heraklion, **Greece**, 21-24 September **2008**.

F. Thétiot, Domitille Giaume, and A. Lappas,
"Heterostructures and Doping of Metal-oxide Nanocrystals with Tailored Properties"

Gordon Research Conference: Solid State Chemistry I, New Hampshire, **USA**, 27 July - 1 August **2008**.

M. Giot, L. Chapon, J. Androulakis, M.A. Green, P.G. Radaelli, and A. Lappas,
"Order Against Frustration in a Manganese Delafossite Triangular Lattice System"

APS March Meeting, New Orleans, **USA**, 10-14 March **2008**.

C. Vecchini, L. Chapon, H. Kageyama, O. Adamopoulos, and A. Lappas
"Structural Distortions in the Spin-gap Regime of the Quantum Antiferromagnet SrCu₂(BO₃)₂"

European Conference of Molecular Magnetism, Tomar, **Portugal**, 10-15 October **2006**.

D. Perisinakis, D. Gray, E. Pomjakushina, K. Conder, and A. Lappas
"Ultrafast Spin Manipulation in Antiferromagnets: Towards Novel Magneto-optic Devices"
Distinction, for best Poster presentation by the 1st author (MSc student).

5th International Conference on Inorganic Materials, Ljubljana, **Slovenia**, 23-26 September **2006**.

A. Lappas, C.J. Nuttall, Z.G. Fthenakis, V.Y. Pomjakushin, M.A. Roberts
"Topotactic lithium intercalation and electronic properties in the nanostructured Mo₂SbS₂"

Gordon Research Conference: Solid State Chemistry, Il Ciocco, Barga, **Italy**, 5-10 June **2005**.

A. Lappas, D. Arnold, V. Pomjakushin, and M. Green,
"Mixed-Valent Nanoporous Manganates"

2nd Hellenic Crystallographic Association Conference, Athens, **Greece**, 15-16 October **2004**.

A. Lappas, D. Arnold, V. Pomjakushin, and M. Green,
"Intercalation-Induced Charge/Magnetic Ordering in the Na_{0.44}MnO₂ Porous Manganate"

Alexandros Lappas

Colloque AMPERE, NMR and EPR of Broad-Line Solids, Portoroz, Slovenia, 8-12 September 2003.

D. Arcon, A. Zorko, and A. Lappas,

"ESR and ^{51}V NMR Study of the Haldane System $\text{PbNi}_{2-x}\text{Mg}_x\text{V}_2\text{O}_8$ "

Colloque AMPERE, NMR and EPR of Broad-Line Solids, Portoroz, Slovenia, 8-12 September 2003.

A. Zorko, D. Arcon, Z. Jaglicic, C. Nuttall, and A. Lappas,

"X-band ESR Study of the 2D Spin-gap System $\text{SrCu}_2(\text{BO}_3)_2$ "

International Conference on Magnetism 2003, Rome, Italy, 27 July - 1 August 2003.

A. Zorko, D. Arcon, Z. Jaglicic, C. Nuttall, and A. Lappas,

"X-band ESR Study of the 2D Spin-gap System $\text{SrCu}_2(\text{BO}_3)_2$ "

International Conference on Magnetism 2003, Rome, Italy, 27 July - 1 August 2003.

D. Arcon, A. Zorko, P. Cevc, E. Wortham, A. Lappas, E.P. Giannelis, and R. Das,

"Modified Magnetic Interactions in Hybrid Perovskite Nanocomposites"

XVIII Pan-Hellenic Conference on Solid State Physics, Heraklion, Greece, 15-18 September 2002.

E. Wortham, A. Zorko, D. Arcon, R.N. Das, E.P. Giannelis, and A. Lappas,

"Perovskite Nanocrystals in Polymers: a Study of Their Magnetism"

19th General Conference of the EPS Condensed Matter Division & CMMP 2002, Brighton, UK, 7-11 April 2002.

A. Lappas, I. Mastoraki, J. Giapintzakis, K. Prassides, and A. Schenck,

"Doping-Induced Effects in Quasi-One-Dimensional Oxides $\text{PbNi}_{2-x}\text{A}_x\text{V}_2\text{O}_8$ (A= Mg, Co): from Haldane State to Néel Ordering"

Gordon Research Conference: Solid State Chemistry, New Hampshire, USA, 3 July-4 August 2000.

A. Lappas, M. Kurmoo, and K. Prassides,

"Metal Dicyanamide Binary Compounds: A Series of Molecular Magnets"

A NATO Advanced Study Institute on: Muon Science (SUSSP51), School of Physics and Astronomy, University of St. Andrews, St. Andrews, UK, 17-28 July 1998.

A. Lappas, K. Prassides, F.N. Gygax, and A. Schenck,

"Muon Spin Relaxation Studies of the Magnetism in $\text{La}_{1.875}\text{Ba}_{0.125-y}\text{Sr}_y\text{CuO}_4$ ($0 \leq y \leq 0.1$)"

Gordon Research Conference: Solid State Chemistry, New Hampshire, USA, 26-31 July 1998.

A. Lappas, S. Margadonna, C.M. Brown, K. Kordatos, K. Tanigaki, and K. Prassides,

"Polymerisation of Sodium Fullerides: A Comparative Study"

European Research Conference on Chemistry and Physics of Multifunctional Materials: Fullerenes in Context, Espinho, Portugal, 6-11 September 1997.

A. Lappas, M. Kosaka, K. Tanigaki, and K. Prassides,

"Orientational Order in AC_{60} Alkali Fullerides"

Condensed Matter and Materials Physics Conference (CMMP'92), University of Sheffield, Sheffield, UK, 15-17 December 1992.

A. Lappas, K. Prassides, A. Amato, F.N. Gygax, and A. Schenck,

" μ SR Studies of Layer Cuprate Systems"

Condensed Matter and Materials Physics Conference (CMMP'91), International Convention Centre, Birmingham, UK, 17-19 December 1991.

C. Christides, A. Lappas, K. Prassides, M. Pissas, and D. Niarchos,

"An X-Ray Absorption Study of the YBaCuFeO_{5+x} Double Layered Perovskites"

Alexandros Lappas

Condensed Matter and Materials Physics Conference (CMMP'91), International Convention Centre, Birmingham, **UK**, 17-19 December **1991**.

A. Lappas and K. Prassides,

"Structural Phase Transitions in $\text{La}_2\text{Cu}_{1-x}\text{Co}_x\text{O}_{4+\delta}$ "

International Conference on Inorganic Chemistry (The Royal Society of Chemistry), University of Sussex, Brighton, **UK**, 22-25 July **1991**.

C.J. Bell, A. Lappas, K. Prassides, M.G. Kanatzidis, and C-G. Wu,

"Intercalation Chemistry of Layer FeOCl"

APPENDIX IV

SUPERVISION OF MSc AND PhD DISSERTATIONS

2013 – <i>present</i>	Supervisor of PhD degrees in progress (2)
2013 – 2021	Supervised the dissertation of awarded PhD degrees (2)
2011 – 2016	Supervised the dissertation of an awarded PhD degree (1)
2014 – 2016	Supervised a postgraduate student awarded with an MSc degree (1)
2006 – 2014	Supervised the dissertation of awarded PhD degrees (3)
2004 – 2010	Supervised postgraduate students awarded with an MSc degree (3)
2000 – 2001	Co-supervision of awarded postgraduate MSc theses (3)

2020 – *present*

“Chemical-physics of Two-dimensional Magnetic and Superconducting Energy Materials”
Ms. Myrsini Kaitatzi, *Ph.D* candidate; Materials Science and Tech. – Univ. of Crete, **2021-*present***.

“Electron Correlations in Layered Metal Chalcogenides: Structure and Physical Properties”,
Mr. Alexandros Deltsidis, *Ph.D.* candidate; Materials Science and Tech. – Univ. of Crete, **2020-*present***.

2013 – 2021

“Optimization of Iron Oxide Nanocrystals’ Response: Structural Disorder and Magnetically-Mediated Functionalities”,
Mr. Giorgos Antonopoulos, *Ph.D.* Materials Chemistry – Univ. of Crete, **2013-2021**.

“Strongly Correlated Transition Metal Oxides: Synthesis, Structure, Magnetic, Dielectric and Dynamical Properties”,
Ms. Eleni Aza, *Ph.D.* Materials Physics – Univ. of Ioannina, **2013-2019**.

2011 – 2016

“Development and Assembly of Hybrid Nanocrystals: Structural, Electronic and Magnetic Properties”,
Mr. Kostantinos Brintakis, *Ph.D.* Materials Physics – Aristotle Univ. of Thessaloniki, **2011-2016**.

2014 – 2016

“System Automation for Multispectral and Time-resolved Imaging for Studying Phase Transitions in Magneto-dielectric Materials”
Mr. Kyriakos Mouratis; *M.Sc.* Advanced Production Systems, Automation and Robotics – Tech. Ed. Inst. of Crete, **2014-2016**.

2006 – 2014

“Synthesis and Characterisation of Hybrid Nanocrystal Structures with Tailored Properties”,
Ms. Athanasia Kostopoulou, *Ph.D.* Materials Chemistry – Univ. of Crete, **2007-2012**.

“Structural, Magnetic and Magnetodielectric Behavior of Geometrically Frustrated Manganese Oxides”, Ms. Ioanna Bakaimi, *Ph.D.* Physics – Univ. of Crete, **2008-2014**.

“Structure and Magnetism in Microporous Mixed-valence Transition Metal Oxides”,
Mr. Othon Adamopoulos, *Ph.D.* Materials Chemistry – Univ. of Crete, **2006-2013**.

2004 – 2010

“Growth and Characterisation of Iron Oxide Magnetic Nanocrystals”,
Mr. Konstantinos Brintakis, *M.Sc.* Physics – Aristotle Univ. of Thessaloniki, **2007-2010**.

Alexandros Lappas

“Femtosecond Time-resolved Studies of Spin Reorientation Transitions in Orthoferrite Antiferromagnets”,
Mr. Dimitris Perisinakis, *M.Sc. Physics – Univ. of Crete, 2005-2008.*

“Polymer/Layered Silicate Clay and Polymer/Organic-Inorganic Perovskite Nanohybrid Materials: Syntheses and Study of their Physical Properties”,
Ms. Ioanna Andrianaki, *M.Sc. Physics – Univ. of Crete, 2004-2006.*

2000 – 2001

“Organic-Inorganic Perovskites: Synthesis, Structure and Optical Characterisation of the Solid-Solution $(C_4H_9NH_3)_2Pb_{1-x}Eu_xI_4$ ($x= 0, 0.2, 0.6, 1$)”,
Mr. Grigoris Beis, *M.Sc. Physics – Univ. of Crete, 2000-2001.*

“Structure and Magnetism in the Quasi-One-Dimensional Haldane-Gap System $PbNi_{2-x}A_xV_2O_8$ ($A= Mg, Co$)”,
Ms. Irene Mastoraki, *M.Sc. Physics – Univ. of Crete, 2000-2001.*

“(Spin-Vacancy) Induced Magnetic Ordering in One-Dimensional Spin Systems $PbNi_{2-x}Mg_xV_2O_8$ ”,
Mr. Vassilis Alexandrakis, *M.Sc. Physics – Univ. of Crete, 2000.*

MENTORING OF POST-DOCTORATE FELLOWS

- Former Post-doc Fellows I supervised in my lab, are now in tenure-track careers at organizations such as: *PANalytical, Johnson Matthey, Kent University, Ecole Centrale Paris, National Physical Lab, Ecole Nationale Supérieure de Chimie de Paris, Zhejiang Sci-Tech University.*

2022 – present	Post-doc Fellow funded via a FORTH Synergy grant (1)
2019 – 2021	Post-doc Fellows funded via a US ONRG grant (2)
2018 – 2019	Post-doc Fellows funded via a US ONRG grant (1)
2012 – 2015	Post-doc Fellows funded via collaborative national grants (2)
2007 – 2010	Marie-Curie Post-doc Fellows (9)
2006 – 2009	Post-doc Fellows shared with ISIS-RAL (2)
2003 – 2004	Co-funded Post-doc Fellow of British Council – General Secretariat of Research & Technology (1)
2000 – 2003	Marie-Curie Post-doc Fellows (2)

My collaboration with the Post-doctorate Young Researchers involved the following research projects:

1. “Development of Colloidal Hybrid Nanoclusters for Multi-modal Imaging of Atherosclerosis”, Eirini Koutsouroubi, IESL-FORTH, **Jan. 2022- present** (*FORTH Synergy grant 2021 – 2023*).
2. “Solvo-thermal Synthesis and Understanding of Structural Modifications in High- T_c Intercalated Iron Chalcogenides”, Izar Capel Berdiell, IESL-FORTH, **Feb. 2020- Apr. 2021** (*US ONRG 2018 – 2022*).
3. “Fluctuations in Molecule Intercalated Iron Chalcogenide Superconductors” Elijah Lator, IESL-FORTH, **Aug. 2019- Aug. 2020** (*US ONRG 2018 – 2022*).
4. “Deciphering the Workings of Molecule Intercalated Iron Chalcogenides” Panagiotis Mangelis, IESL-FORTH, **Jan. 2018- Mar. 2019** (*US ONRG 2018 – 2022*).
5. “Functional Magnetic Oxides: Growth and Coupled Properties” Antonio Fernandez-Martinez, IESL-FORTH, **Jul. 2014- Jun. 2015** (*NSRF 2007 – 2013, Greece*).
6. “Novel Nanostructures of ZnO and Their Applications in Nanophotonics and Energy Conversion” Athanasia Kostopoulou, IESL-FORTH, **Jan.- Dec. 2013** (*NSRF 2007 – 2013, Greece*).

7. “Magnetic Properties of Field-assembled Fe_xO_y Colloidal Nanocrystal Cluster Arrays”,
Anastasia Trunova, IESL-FORTH, **Apr. 2010- Sept. 2010** (*Marie-Curie Fellow*).
8. “Fluoerescent Labelling of Fe_xO_y Colloidal Nanocrystal Clusters”,
Miguel Spuch-Calvar, IESL-FORTH, **Feb. 2010- Sept. 2010** (*Marie-Curie Fellow*).
9. “Incorporation of Colloidal Nanocrystal Clusters in Fiber Optic Devices”,
Jan Vanda, IESL-FORTH, **Jul. 2009- Jul. 2010** (*Marie-Curie Fellow*).
10. “Assembly of Au-based Hybrid Nanocrystals in Nanogaps and Transport Phenomena”,
Peigang Li, IESL-FORTH, **Jul. 2009- Sept. 2010** (*Marie-Curie Fellow*).
11. “Hybrid Photonic Nanocrystals Combining Magnetic and Fluorescent/Plasmonic Properties”,
Nicolas Nerambourg, IESL-FORTH, **Sept. 2009- Jan. 2010** (*Marie-Curie Fellow*).
12. “Superlattices of Hybrid Nanocrystals Clusters”,
Rob Pullar, IESL-FORTH, **Oct. 2008- Apr. 2009** (*Marie-Curie Fellow*).
13. “Hybrid Nanocrystals: Modelling and Simulations”,
Krisztian Palotas, IESL-FORTH, **2008-2009** (*Marie-Curie Fellow*).
14. “Development of Binary Hetero-nanostructures”,
Franck Thetiot, IESL-FORTH, **Oct. 2007- Apr. 2010** (*Marie-Curie Fellow*).
15. “Hybrid Nanocrystals Exhibiting Advanced and Tailored Properties”,
Domitille Giaume, IESL-FORTH, **Mar.- Dec. 2007** (*Marie-Curie Fellow*).
16. “Neutron Diffraction of Strongly Correlated & Frustrated Magnetic Systems”,
Carlo Vecchini, IESL-FORTH & ISIS-RAL, **2006-2009** (*EC Research Infrastructures Post-doc Fellow*).
17. “Magnetism in Frustrated Lattice Topologies ”,
Maud Giot, IESL-FORTH & ISIS-RAL, **2006-2007** (*EC Research Infrastructures Post-doc Fellow*).
18. “Mixed-Valent Nanoporous Manganese Oxides”,
Donna Arnold, IESL-FORTH, **Nov. 2003- Apr. 2004** (*British Council – GSRT Fellow*).
19. “Synthesis and Physical Investigations of Intercalated Layered Metal-Nitride Nanohybrids”,
Christopher J. Nuttall, IESL-FORTH, **2001-2003** (*Marie-Curie Fellow*).
20. “Organic-Inorganic Perovskites for Magnetic Nanocomposites” ,
Etienne Wortham, IESL-FORTH, **2000-2002** (*Marie-Curie Fellow*).