

Publications (First author: 17, corresponding author: 14)

[1] A. Kostopoulou, I. Tsiaoussis and A. Lappas*

"Magneto-optical properties of iron oxide nanoclusters"

AIP Conference Proceedings, 1288, 2010.

[2] A. Kostopoulou, I. Tsiaoussis and A. Lappas*

"Magnetic Iron Oxide Nanoclusters with Tunable Optical Response"

Photon. Nanostruct: Fundam. Appl. 2011, 9 (2), 201-206

[3] A. Kostopoulou, F. Thétiot, I. Tsiaoussis, M. Androulidaki, P. D. Cozzoli, and A. Lappas*

"Colloidal Anisotropic ZnO-Fe@FexOy Nanoarchitectures with Interface-Mediated Exchange-Bias and Band-Edge Ultraviolet Fluorescence"

Chem. Mater., 2012, 24 (14), 2722-2732.

[4] E. Magoulakis, A. Kostopoulou, G. N. Arvanitakis, A. G. Kanaras, A. N. Andriotis, A. Lappas and P. A. Loukakos*

"Porosity-moderated ultrafast electron transport in Au nanowire networks"

Applied Physics A, 2013, 111 (3), 711-717.

[5] D. Fragouli, B. Torre, F. Villafiorita-Monteleone, A. Kostopoulou, G. Nanni, A. Falqui, A. Casu, A. Lappas, R. Cingolani, A. Athanassiou*

"Nanocomposite pattern-mediated magnetic interactions for localized deposition of nanomaterials"

ACS Appl. Mater. Interfaces, 2013, 5 (15), 7253–7257

[6] A. Kostopoulou, K. Brintakis, A. Lascialfari, M. Angelakeris, M. Vasilakaki, K.N. Trohidou, A.P. Douvalis, S. Psycharakis, A. Ranella, L. Manna, A. Lappas*

"Iron-oxide colloidal nanoclusters: From fundamental physical properties to diagnosis and therapy"

Progress in Biomedical Optics and Imaging - Proceedings of SPIE, 2014

[7] A. Kostopoulou, K. Brintakis, M. Vasilakaki, K.N. Trohidou, A.P. Douvalis, A. Lascialfari, L. Manna, A. Lappas*

"Assembly-mediated Interplay of Dipolar Interactions and Surface Spin Disorder in Colloidal Maghemite Nanoclusters" (Editor's choice as a "Hot Article")

Nanoscale, 2014,6, 3764-3776

[8] A. Kostopoulou, S. K. P. Velu, K. Thangavel, F. Orsini, K. Brintakis, S. Psycharakis, A. Ranella, L. Bordonali, A. Lappas, A. Lascialfari*

"Colloidal Assemblies of Oriented Maghemite Nanocrystals and their NMR Relaxometric Properties"

Dalton Transactions, 2014, 43, 8395-9404

[9] E. Y. Yuzik-Klimova, N. V Kuchkina, S. Sorokina, D. G. Morgan, L. Z. Nikoshvili, N. L., V. G. Matveeva, E. M Sulman, B. D Stein, W. E Mahmoud, A. A. Al-Ghamdi, A. Kostopoulou, A. Lappas, Z. B Shifrina and L. M. Bronstein*

"Magnetically Recoverable Catalysts Based on Polyphenylenepyridyl Dendrons and Dendrimers: Control over Nanoparticle Formation and Catalytic Properties"

RSC Adv., 2014, 4, 23271-23280

[10] E. Kasotakis, A. Kostopoulou, M. Spuch-Calvar, M. Androulidaki, N. Pelekanos, A. G. Kanaras, A. Mitraki, A. Lappas*

"Assembly of quantum dots on peptide nanostructures and their spectroscopic properties"

Appl. Phys. A, 2014, 116, 977-985

[11] E. Kasotakis, A. Kostopoulou, M. Spuch-Calvar, M. Androulidaki, N. Pelekanos, A. G. Kanaras, A. Mitraki, A. Lappas*

"Thin film mesoscale organization of nanoparticles by using biomolecular peptide tools" (Conference paper)

Source of the Document Progress in Biomedical Optics and Imaging - Proceedings of SPIE, 2014

[12] G.M. Morgan, B.S. Boris, N.V. Kuchkina, E.Y. Yuzik-Klimova, S.A. Sorokina, B.D. Stein, D.I. Svergun, A. Spilotros, A. Kostopoulou, A. Lappas, Z.B. Shifrina, L.M. Bronstein*

"Multicore Iron Oxide Mesocrystals Stabilized by a Poly(phenylenepyridyl) Dendron and Dendrimer: Role of the Dendron/Dendrimer Self-Assembly"

Langmuir, 2014, 30, 8543-8550.

[13] N.V. Kuchkina, D.G. Morgan, A. Kostopoulou, A. Lappas, K. Brintakis, B.S. Boris, E.Y. Yuzik-Klimov, B.D. Stein, D.I. Svergun, A. Spilotros, M.G. Sulman, L. Zh. Nikoshvili, E.M. Sulman, Z.B. Shifrina, L.M. Bronstein*

"Hydrophobic periphery tails of polyphenylenepyridyl dendrons control nanoparticle formation and catalytic properties"

Chem. Mater., 2014, 26, 5654–5663

[14] A. Kostopoulou, A. Lappas*

"Colloidal magnetic nanocrystal clusters: Variable length-scale interaction mechanisms, synergetic functionalities and technological advantages" (Review)

Nanotechnology Reviews, 2015, 4, 595-624

[15] D. Sakellari, K. Brintakis, A. Kostopoulou, K. Simeonidis, A. Lappas and M. Angelakeris*

"Ferrimagnetic nanocrystal assemblies as versatile magnetic particle hyperthermia mediators"

Materials Science and Engineering: C, 2016, 58, 187-193

[16] A. Kostopoulou,* M. Sygletou, K. Brintakis, A. Lappas and E. Stratakis*

"Low-temperature benchtop-synthesis of all-inorganic perovskite nanowires"

Nanoscale, 2017, 9, 18202-18207

[17] A. Kostopoulou, E. Kymakis, E. Stratakis

"Perovskite nanostructures for photovoltaic and energy storage devices"

J. Mater. Chem. A, 2018, 6, 9765-9798

[18] A. Kostopoulou, K. Brintakis, E. Fragozeorgi, A. Anthousi, L. Manna, S. Begin-Colin, C. Billotey, A. Ranella, G. Loudos, I. Athanassakis, A. Lappas*

"Iron Oxide Colloidal Nanoclusters as Theranostic Vehicles and Their Interactions at the Cellular Level"

Nanomaterials, 2018, 8, 315 (Front cover)

[19] K. Alexaki, A. Kostopoulou,* M. Sygletou, G. Kenanakis, E. Stratakis*

"Unveiling the Structure of MoS_x Nanocrystals Produced upon Laser Fragmentation of MoS₂ Platelets"

ACS Omega, 2018, 3, 16728–16734

[20] A. Kostopoulou,* D. Vernardou,* K. Savva, E. Stratakis*

"All-inorganic lead halide perovskite nanohexagons for high performance air-stable lithium batteries"

Nanoscale 2019, 11, 882-889.

[21] A. Kostopoulou,* K. Brintakis, NK. Nasikas, E. Stratakis*

"Perovskite nanocrystals for energy conversion and storage"

Nanophotonics 2019, 8, 1607-1640.

[22] A. Heuer-Jungemann, N. Feliu, I. Bakaimi, M. Hamaly, A. Alkilany, I. Chakraborty, A. Masood, M. F. Casula, A. Kostopoulou, E. Oh, K. Susumu, M. H. Stewart, I. L. Medintz, E. Stratakis, W. J. Parak, A. G. Kanaras,*

"The role of ligands in the chemical synthesis and applications of inorganic nanoparticles"

Chemical Reviews 2019, 119, 4819-4880 (Front Cover).

[23] K. Brintakis, E. Gagaoudakis, A. Kostopoulou,* V. Faka, K. Argyrou, V. Binas, G. Kiriakidis, E. Stratakis,*

"Ligand-free all-inorganic metal halide nanocubes for fast, ultra-sensitive and self-powered ozone sensors"

Nanoscale Adv. 2019, 1, 2699-2706.

[24] A. Lappas,* G. Antonaropoulos, K. Brintakis, M. Vasilakaki, K. N. Trohidou, V. Iannotti, G. Ausanio, A. Kostopoulou, M. Abeykoon, I. K. Robinson, E. S. Bozin

"Vacancy-Driven Noncubic Local Structure and Magnetic Anisotropy Tailoring in $\text{Fe}_x\text{O}-\text{Fe}_3-\delta\text{O}_4$ Nanocrystals"

Phys. Rev. X 2019, 9, 041044.

[25] A. Kostopoulou,* D. Vernardou,* D. Makri, K. Brintakis, K. Savva, E. Stratakis*

"Highly stable metal halide perovskite microcube anodes for lithium-air batteries"

Journal of Power Sources Advances 2020, 3, 100015

[26] I. Konidakis,* K. Brintakis, A. Kostopoulou, I. Demeridou, P. Kavatzikidou, E. Stratakis*

"Highly luminescent and ultrastable cesium lead bromide perovskite patterns generated in phosphate glass matrices"

Nanoscale 2020, 12, 13697-13707

[27] A Kostopoulou, * K Brintakis, E Serpetzoglou, E Stratakis*

"Laser-Assisted Fabrication for Metal Halide Perovskite-2D Nanoconjugates: Control on the Nanocrystal Density and Morphology"

Nanomaterials 2020, 10, 747

[28] A. Kostopoulou,* D. Vernardou,* D. Makri, K. Brintakis, K. Savva, E. Stratakis*

Highly stable metal halide perovskite microcube anodes for lithium-air batteries

Journal of Power Sources Advances 2020, 3, 100015

[29] S. Mourdikoudis,* A. Kostopoulou*, AP. LaGrow*

“Magnetic Nanoparticle Composites: Synergistic Effects and Applications”

Advanced Science 2021, 8, 2004951

[30] A. Kostopoulou,* D Vernardou*

“Perovskite Nanostructures: From Material Design to Applications”

Nanomaterials 2021, 12, 97

[31] A Argyrou, K Brintakis,* A Kostopoulou,* E Gagaoudakis, I Demeridou, V. Binas, G. Kiriakidis, E. Stratakis*

“Highly sensitive ozone and hydrogen sensors based on perovskite microcrystals directly grown on electrodes”

Journal of Materiomics 2022, 8, 446

[32] A. Kostopoulou,* K. Brintakis,* M. Sygletou, K. Savva, N. Livakas, M. A. Pantelaïou, Z. Dang, A. Lappas, L. Manna, E. Stratakis*

“Laser-Induced Morphological and Structural Changes of Cesium Lead Bromide Nanocrystals”

Nanomaterials 2022, 12, 703

[33] A. Argyrou, K. Brintakis, A. Kostopoulou,* E. Gagaoudakis, I. Demeridou, V. Binas, G. Kiriakidis, E. Stratakis*

“Highly sensitive ozone and hydrogen sensors based on perovskite microcrystals directly grown on electrodes” , Journal of Materiomics 2022, 8 (2), 446-453

[34] A. Kostopoulou,* I. Konidakis, E. Stratakis

“Two-dimensional metal halide perovskites and their heterostructures: from synthesis to applications

Nanophotonics 2023, 12 (9), 1643-1710, <https://doi.org/10.1515/nanoph-2022-0797>

[35] S. Daskalakis, A. Kostopoulou, K. Brintakis, E. Stratakis, V. Prasad Prasadam, K. Menguelti, N. Bahlawane, D. Vernardou*

Investigation of Si-Coated Multiwalled Carbon Nanotubes as Potential Electrodes for Multivalent Metal-Ion Electrochemical Energy Storage Systems,

The Journal of Physical Chemistry C 2023, 127 (27), 13364-13379

Book Chapter

[1] "Ferrocene-containing polyphenylenes as precursors for magnetic nanomaterials"

R.A. Dvorikova, Y.V. Korshak, L.N. Nikitin, M.I. Buzin, V.A. Shanditsev, Z.S. Klemenkova, A.L. Rusanov, A.R. Khokhlov, A. Lappas, A. Kostopoulou

Characterization and Development of Novel Materials Research Compendium, 2013,
169-182

[2] "Magnetic Nanoparticles in Polymers"

R.A. Dvorikova, Y.V. Korshak, L.N. Nikitin, M.I. Buzin, V.A. Shanditsev, Z.S.
Klemenkova, A.L. Rusanov, A.R. Khokhlov, A. Lappas, A. Kostopoulou

Engineering of Polymers and Chemical Complexity, Volume II, 2014, pp. 145-160

[3] "Metal Nanoparticles in Polymers"

R.A. Dvorikova, Y.V. Korshak, L.N. Nikitin, M.I. Buzin, V.A. Shanditsev, Z.S.
Klemenkova, A.L. Rusanov, A.R. Khokhlov, A. Lappas, A. Kostopoulou

Engineering of Polymers and Chemical Complexity, Volume I, 2014, pp. 71-87