CV of Liberato Manna

Preparazione professionale
Dottorato in Chimica, Università di Bari, Italia, 2001
Laurea in Chimica (110/110 e lode), Università di Bari, Italia, 1996

Interessi di ricerca
Sintesi e assemblaggio di nanocristalli colloidali, studio di trasformazioni strutturali, chimiche e di superficie in materiali su scala nanometrica, modellazione e applicazioni correlate in settori connessi all'energia, in fotonica, elettronica e biologia.

Aree di competenza
Materiali e dispositivi inorganici funzionali, materiali funzionali nanostrutturati, superfici, interfacce e applicazioni

Appointments

Da Giugno 2018 ad ora:	Editore associato – Nanoscale and Nanoscale Advances
Dal 2016 ad ora:	Professore di Chimica Teorica, Università di Genova (Italia), **incarico part-time, non retribuito**
Dal 2015 ad ora:	Vicedirettore per le line di ricerca "materiali e le nanotecnologie", Istituto Italiano di Tecnologia di Genova (Italia)
Dal 2010 ad ora:	Professore di Nanoscienze Quantistiche presso il Kavli Institute of Nanoscience, Delft University of Technology (Paesi Bassi), **incarico part-time, non retribuito**
Dal 2009 ad ora:	Capo del Dipartimento di Nanochimica dell'Istituto Italiano di Tecnologia di Genova (Italia)
2006- 2009:	Leader della Divisione di Chimica presso il National Nanotechnology Lab di Lecce (Italia)
2003-2008:	Junior Scientist presso il National Nanotechnology Lab di Lecce (Italia)
2003:	Visiting Scientist presso il Center for Nanoscience, Munich (Germania)
2001-2003:	Postdoctoral Fellow presso la University of California, Berkeley (USA)
1999-2000:	Visiting student presso la University of California, Berkeley (USA)

Finanziamenti ricevuti

Con affiliazione IIT/CNR

2020-2022:	Progetto AI-4-QD "ARTIFICIAL INTELLIGENCE AND DATA MANAGEMENT FOR COLLOIDAL QUANTUM DOT MATERIALS RESEARCH", bilaterale con Israele, partner
2018-2020:	H2020-MSCA-IF-2017 project (RETAIN, contract n. 794560), Supervisor (PI: Dmitry Baranov)
2016-2019:	H2020 Marie Skłodowska-Curie Research IF-GF project (MOPTOPus, contract n. 705444), Supervisore
2015-2019:	H2020 Marie Skłodowska-Curie Research and Innovation Staff Exchange (RISE) (Compass, contract n. 691185), partner
2014-2019:	European Research Council (ERC) FP7 Consolidator grant (TRANS-NANO, contract. n. 614897)
2014-2016:	Fondazione Cariplo, project partner "Green nanomaterials for next-generation photovoltaics (GREENS)"

2013-2016:	FP7-ICT-2013-FET-F "Graphene-Driven Revolutions in ICT and Beyond", Project Partner
2012-2014:	European FP7 Marie Curie IEF project (NIRPLANA, contract n. 298022), Supervisore
2012-2014:	European FP7 Marie Curie IEF project (LOTOCON, contract n. 301100), Supervisore
2013-2016:	European FP7 Marie Curie ITN project (MAGNETICFUN, contract n. 290248), partner
2012-2015:	European FP7 large scale project (SCALENANO, contract n. 284489), partner
2011-2014:	Italian FIRB project (Nanostructured oxides, contract n. RBAP115AYN), partner
2009-2013:	European Research Council (ERC) FP7 starting grant (NANO-ARCH, contract n. 240111), PI
2009-2012:	European project FP7 SMALL, project partner (MAGNIFYCO, contract n. 228622), partner
2006-2009:	European FP6 Marie Curie TOK Network, scientific leader per NNL (NANOTAIL, contract n. 042459), partner
2006-2010:	Italy-USA Bilateral Project (Italian Min. of Research), scientific leader per NNL (contract n. RBIN048TSE)
2005-2008:	European project FP6 STREP (SA-NANO, contract n. 013698), coordinatore

Con affiliazione Delft

2018-2021:	H2020-FETOPEN-2016-2017 project "Testing the Large-Scale Limit of Quantum Mechanics" (TEQ, contract n. 766900), Partner
	Dutch Technology Foundation STW (n. 13903), co-PI
	Dutch Technology Foundation STW (n. 12734), co-PI

Pubblicazioni

~320 pubblicazioni in riviste internazionali peer reviewed (di cui 15 articoli di rassegna), 16 capitoli di libri, 1 libro

Citazioni

~28,700 citazioni, H index 79 (ISI Web of Science, aggiornato a Giugno 2019)
~37,600 citazioni, H index 87 (Google Scholar, aggiornato a Giugno 2019)

Premi e riconoscimenti:

2019:	Medaglia Sacconi in Chimica Inorganica (Società Italiana di Chimica)
2019:	Lectio Magistralis MEM-C (Università di Washington a Seattle)
2019:	Lectio Magistralis "Waite Philip Fishel" in Chimica (Vanderbilt University)
2018:	Ricercatore "Highly cited" (Clarivate Analytics, https://hcr.clarivate.com/)
2018:	Premio "Chimici Eccellenze a Livello Internazionale", Federazione Nazionale degli Ordini dei Chimici e dei Fisici
2018:	premio "referee eccellente" per la rivista "Chemistry of Materials"
2017:	premio "referee eccellente" per la rivista "Chemistry of Materials"
2017:	Fellow della Royal Society of Chemistry
2017:	Premio "Pugliesi nel Mondo" (Regione Puglia)
2013:	Premio "American Chemical Society Early Career Award in Experimental Physical Chemistry" (http://phys-acs.org/awards/2013.html)
2011:	Posizionatosi 24-esimo fra i primi 100 Chimici al mondo nella decade 2000-2010, secondo Thomson Reuters (http://www.sciencewatch.com/dr/sci/misc/Top100Chemists2000-10/)
2011:	Lectio Magistralis "Journal of Materials Chemistry" (Royal Society of Chemistry)
2011:	Indicato dalla rivista ChemComm fra i ricercatori emergenti nelle scienze chimiche
2010:	Indicato dalla rivista Journal of Materials Chemistry fra i ricercatori emergenti nelle scienze dei materiali
2009:	"Emerging Research Front Paper in the field of Materials Science" (ScienceWatch, Thomson Reuters, http://sciencewatch.com/, October 2009 issue).
2009:	premio "R&D 100" per 'celle solari a basso costo'
2007:	premio 'Ugo Campisano' per giovani ricercatori nelle scienze dei materiali (Istituto Nazionale della Fisica della Materia, www.infm.it).

2007:	Posizionatosi al nono posto fra i ricercatori più citati al mondo nel settore dei nanocristalli, secondo 'Essential Science Indicators' (Thomson Scientific), www.esi-topics.com.
2005:	Annoverato fra i nove innovatori d'Italia under 35 (articolo apparso su 'Il Sole 24 ore')
2002:	Premio 'Berkeley Lab Technology Transfer Award', per eccellenza nelle attività di trasferimento tecnologico.
2001:	Premio 'Semerano' (Società Italiana di Chimica Sezione di Chimica Fisica) per la migliore tesi di dottorato in Chimica Fisica in Italia nel 2001.
2000:	Premio 'Umberto Maria Grassano Award' come migliore studente alla Scuola Internazionale "Nanotubes and Nanostructures 2000" (Società Italiana di Fisica).

Presentazion su invito

103 comunicazioni orali su invito a conferenze internazionali, 50 seminari su invito presso università, centri di ricerca e laboratori industriali

Brevetti

10 brevetti, 19 domande di brevetto presentate

Attività d'insegnamento (tutti i corsi sono stati svolti a titolo gratuito)

2015, 2016, 2018, 2019:	Struttura Elettronica dei Solidi (corso di dottorato, Univ. di Genova)
Dal 2016:	Chimica Teorica (laurea specialistica, Univ. di Genova)
2014- 2015:	Fundamentals of Crystallography (corso di dottorato, Univ. di Genova)
2006:	Chimica Fisica delle interfasi (laurea specialistica, Univ. di Lecce)
2004:	Scienze e tecnologie dei materiali polimerici (laurea magistrale, Univ. di Lecce)

Organizzazione di simposi e conferenze

2019:	**Chairman** della conferenza internazionale "Applied Nanotechnology and Nanoscience (ANNIC)", Parigi 19-21 Novembre 2019
2017:	**Chairman** della conferenza internazionale "Applied Nanotechnology and Nanoscience (ANNIC)", Rome 18-20 Octobre 2017
2017:	Euromat 2017, Thessaloniki, Greece, September 17-22 2017, organizzatore di simposio
2016:	EuchemS, Seville, 11-15 Settembre 2016, organizzatore di simposio
2016:	Co-organizzatore del simposio "Faraday Discussion - Nanoparticles with Morphological and Functional Anisotropy", 4-6 Luglio 2016
2015:	Co-organizzatore del simposio "From Molecules to Colloidal Compound Semiconductor Nanocrystals – Advances in Mechanism-Enabled Design and Syntheses", al 2015 MRS Spring Meeting, San Francisco, USA.
2014:	**Chairman** della conferenza internazionale "Quantum Dots 2014" Pisa, Maggio 2014.
2012:	Co-organizzatore del simposio "Organized Nanostructures and Nano-objects: Fabrication, characterization and applications" durante l'EMRS Fall Meeting 2012, 17-21 Settembre 2012, Warsaw University of Technology
2010:	Co-organizzatore del simposio "Science and Technology of Nanotubes and Nanowires and Graphene" durante il 2010 European Materials Research Society Spring Meeting (EMRS2010) Strasbourg, Francia, 8-10 Giugno 2010
2008:	**Chairman** della conferenza internazionale 'Nanoscience with Nanocrystals' (NANAX3), May 21st-23rd 2008, Lecce.

Lista delle pubblicazioni di Liberato Manna

1. Shamsi, J., A.S. Urban, M. Imran, L. De Trizio, and L. Manna, *Metal Halide Perovskite Nanocrystals: Synthesis, Post-Synthesis Modifications, and Their Optical Properties.* Chemical Reviews, 2019. **119**(5): p. 3296-3348.
2. Roda, C., A.L. Abdelhady, J. Shams, M. Lorenzon, V. Pinchetti, M. Gandini, F. Meinardi, L. Manna, and S. Brovelli, *O-2 as a molecular probe for nonradiative surface defects in CsPbBr3 perovskite nanostructures and single crystals.* Nanoscale, 2019. **11**(16): p. 7613-7623.
3. Pinchetti, V., A. Anand, Q.A. Akkerman, D. Sciacca, M. Lorenzon, F. Meinardi, M. Fanciulli, L. Manna, and S. Brovelli, *Trap-Mediated Two-Step Sensitization of Manganese Dopants in Perovskite Nanocrystals.* Acs Energy Letters, 2019. **4**(1): p. 85-93.
4. Imran, M., P. Ijaz, L. Goldoni, D. Maggioni, U. Petralanda, M. Prato, G. Almeida, I. Infante, and L. Manna, *Simultaneous Cationic and Anionic Ligand Exchange For Colloidally Stable CsPbBr3 Nanocrystals.* Acs Energy Letters, 2019. **4**(4): p. 819-824.
5. Dhanabalan, B., A. Castelli, M. Palei, D. Spirito, L. Manna, R. Krahne, and M. Arciniegas, *Simple fabrication of layered halide perovskite platelets and enhanced photoluminescence from mechanically exfoliated flakes.* Nanoscale, 2019. **11**(17): p. 8334-8342.
6. Cinquanta, E., D. Meggiolaro, S.G. Motti, M. Gandini, M.J.P. Alcocer, Q.A. Akkerman, C. Vozzi, L. Manna, F. De Angelis, A. Petrozza, and S. Stagira, *Ultrafast THz Probe of Photoinduced Polarons in Lead-Halide Perovskites.* Physical Review Letters, 2019. **122**(16).
7. Castelli, A., G. Biffi, L. Ceseracciu, D. Spirito, M. Prato, D. Altamura, C. Giannini, S. Artyukhin, R. Krahne, L. Manna, and M.P. Arciniegas, *Revealing Photoluminescence Modulation from Layered Halide Perovskite Microcrystals upon Cyclic Compression.* Advanced Materials, 2019. **31**(1).
8. Baranov, D., S. Toso, M. Imran, and L. Manna, *Investigation into the Photoluminescence Red Shift in Cesium Lead Bromide Nanocrystal Superlattices.* Journal of Physical Chemistry Letters, 2019. **10**(3): p. 655-660.
9. Almeida, G., I. Infante, and L. Manna, *Resurfacing halide perovskite nanocrystals.* Science, 2019. **364**(6443): p. 833-834.
10. Akkerman, Q.A., E. Bladt, U. Petralanda, Z.Y. Dang, E. Sartori, D. Baranov, A.L. Abdelhady, I. Infante, S. Bals, and L. Manna, *Fully Inorganic Ruddlesden-Popper Double Cl-I and Triple Cl-Br-I Lead Halide Perovskite Nanocrystals.* Chemistry of Materials, 2019. **31**(6): p. 2182-2190.
11. Wu, C.Z., Z.Y. Dang, M. Prato, S. Marras, A. Cerea, F. De Angelis, L. Manna, and M. Colombo, *Nanosized, Hollow, and Mn-Doped CeO2/SiO2 Catalysts via Galvanic Replacement: Preparation, Characterization, and Application as Highly Active Catalysts.* Acs Applied Nano Materials, 2018. **1**(4): p. 1438-1443.
12. Wang, M.J., Z.Y. Dang, M. Prato, D.V. Shinde, L. De Trizio, and L. Manna, *Ni-Co-S-Se Alloy Nanocrystals: Influence of the Composition on Their in Situ Transformation and Electrocatalytic Activity for the Oxygen Evolution Reaction.* Acs Applied Nano Materials, 2018. **1**(10): p. 5753-5762.
13. Shinde, D.V., Z.Y. Dang, U. Petralanda, M. Palei, M.J. Wang, M. Prato, A. Cavali, L. De Trizio, and L. Manna, *In Situ Dynamic Nanostructuring of the Cu-Ti Catalyst-Support System Promotes Hydrogen Evolution under Alkaline Conditions.* Acs Applied Materials & Interfaces, 2018. **10**(35): p. 29583-29592.

14. Shamsi, J., Z.Y. Dang, P. Ijaz, A.L. Abdelhady, G. Bertoni, I. Moreels, and L. Manna, *Colloidal CsX (X = Cl, Br, I) Nanocrystals and Their Transformation to CsPbX3 Nanocrystals by Cation Exchange.* Chemistry of Materials, 2018. **30**(1): p. 79-83.
15. Petralanda, U., L. De Trizio, G. Gariano, R. Cingolani, L. Manna, and S. Artyukhin, *Triggering Cation Exchange Reactions by Doping.* Journal of Physical Chemistry Letters, 2018. **9**(17): p. 4895-4900.
16. Palazon, F., D. Perez-del-Rey, S. Marras, M. Prato, M. Sessolo, H.J. Bolink, and L. Manna, *Coating Evaporated MAPI Thin Films with Organic Molecules: Improved Stability at High Temperature and Implementation in High-Efficiency Solar Cells.* Acs Energy Letters, 2018. **3**(4): p. 835-839.
17. Palazon, F., F. Chen, Q.A. Akkerman, M. Imran, R. Krahne, and L. Manna, *Effects of Oxygen Plasma on the Chemical, Light-Emitting, and Electrical-Transport Properties of Inorganic and Hybrid Lead Bromide Perovskite Nanocrystal Films.* Acs Applied Nano Materials, 2018. **1**(10): p. 5396-5400.
18. Najafishirtari, S., A. Lak, C. Guglieri, S. Marras, R. Brescia, S. Fiorito, E. Sadrollahi, F.J. Litterst, T. Pellegrino, L. Manna, and M. Colombo, *Manipulating the morphology of the nano oxide domain in AuCu-iron oxide dumbbell-like nanocomposites as a tool to modify magnetic properties.* Rsc Advances, 2018. **8**(40): p. 22411-22421.
19. Najafishirtari, S., C. Guglieri, S. Marras, A. Scarpellini, R. Brescia, M. Prato, G. Righi, A. Franchini, R. Magri, L. Manna, and M. Colombo, *Metal-support interaction in catalysis: The influence of the morphology of a nano-oxide domain on catalytic activity.* Applied Catalysis B-Environmental, 2018. **237**: p. 753-762.
20. Mugnaioli, E., M. Gemmi, R.Y. Tu, J. David, G. Bertoni, R. Gaspari, L. De Trizio, and L. Manna, *Ab Initio Structure Determination of Cu2-xTe Plasmonic Nanocrystals by Precession-Assisted Electron Diffraction Tomography and HAADF-STEM Imaging.* Inorganic Chemistry, 2018. **57**(16): p. 10241-10248.
21. Longoni, G., J.K. Panda, L. Gagliani, R. Brescia, L. Manna, F. Bonaccorso, and V. Pellegrini, *In situ LiFePO4 nano-particles grown on few-layer graphene flakes as high-power cathode nanohybrids for lithium-ion batteries.* Nano Energy, 2018. **51**: p. 656-667.
22. Locardi, F., M. Cirignano, D. Baranov, Z.Y. Dang, M. Prato, F. Drago, M. Ferretti, V. Pinchetti, M. Fanciulli, S. Brovelli, L. De Trizio, and L. Manna, *Colloidal Synthesis of Double Perovskite Cs2AgInCl6 and Mn-Doped Cs2AgInCl6 Nanocrystals.* Journal of the American Chemical Society, 2018. **140**(40): p. 12989-12995.
23. Lak, A., M. Cassani, B.T. Mai, N. Winckelmans, D. Cabrera, E. Sadrollahi, S. Marras, H. Remmer, S. Fiorito, L. Cremades-Jimeno, F.J. Litterst, F. Ludwig, L. Manna, F.J. Teran, S. Bals, and T. Pellegrino, *Fe2+ Deficiencies, FeO Subdomains, and Structural Defects Favor Magnetic Hyperthermia Performance of Iron Oxide Nanocubes into Intracellular Environment.* Nano Letters, 2018. **18**(11): p. 6856-6866.
24. Kostopoulou, A., K. Brintakis, E. Fragogeorgi, A. Anthousi, L. Manna, S. Begin-Colin, C. Billotey, A. Ranella, G. Loudos, I. Athanassakis, and A. Lappas, *Iron Oxide Colloidal Nanoclusters as Theranostic Vehicles and Their Interactions at the Cellular Level.* Nanomaterials, 2018. **8**(5).
25. Imran, M., P. Ijaz, D. Baranov, L. Goldoni, U. Petralanda, Q. Akkerman, A.L. Abdelhady, M. Prato, P. Bianchini, I. Infante, and L. Manna, *Shape-Pure, Nearly Monodispersed CsPbBr3 Nanocubes Prepared Using Secondary Aliphatic Amines.* Nano Letters, 2018. **18**(12): p. 7822-7831.
26. Imran, M., V. Caligiuri, M.J. Wang, L. Goldoni, M. Prato, R. Krahne, L. De Trizio, and L. Manna, *Benzoyl Halides as Alternative Precursors for the Colloidal Synthesis of Lead-Based Halide Perovskite Nanocrystals.* Journal of the American Chemical Society, 2018. **140**(7): p. 2656-2664.

27. Hu, C., W.H. Chen, Y. Xie, S.K. Verma, P. Destro, G. Zhan, X.Z. Chen, X.J. Zhao, P.J. Schuck, I. Kriegel, and L. Manna, *Generating plasmonic heterostructures by cation exchange and redox reactions of covellite CuS nanocrystals with Au3+ ions.* Nanoscale, 2018. **10**(6): p. 2781-2789.
28. Ghosh, S. and L. Manna, *The Many "Facets" of Halide Ions in the Chemistry of Colloidal Inorganic Nanocrystals.* Chemical Reviews, 2018. **118**(16): p. 7804-7864.
29. Dogan, S., S. Kudera, Z.Y. Dang, F. Palazon, U. Petralanda, S. Artyukhin, L. De Trizio, L. Manna, and R. Krahne, *Lateral epitaxial heterojunctions in single nanowires fabricated by masked cation exchange.* Nature Communications, 2018. **9**.
30. Destro, P., T.M. Kokumai, A. Scarpellini, L. Pasquale, L. Manna, M. Colombo, and D. Zanchet, *The Crucial Role of the Support in the Transformations of Bimetallic Nanoparticles and Catalytic Performance.* Acs Catalysis, 2018. **8**(2): p. 1031-1037.
31. Crisp, R.W., G. Grimaldi, L. De Trizio, W.H. Evers, N. Kirkwood, S. Kinge, L. Manna, L.D.A. Siebbeles, and A.J. Houtepen, *Selective antimony reduction initiating the nucleation and growth of InSb quantum dots.* Nanoscale, 2018. **10**(23): p. 11110-11116.
32. Castillo, A.E.D., V. Pellegrini, H.Y. Sun, J. Buha, D.A. Dinh, E. Lago, A. Ansaldo, A. Capasso, L. Manna, and F. Bonaccorso, *Exfoliation of Few-Layer Black Phosphorus in Low-Boiling-Point Solvents and Its Application in Li-Ion Batteries.* Chemistry of Materials, 2018. **30**(2): p. 506-516.
33. Castelli, A., J. de Graaf, S. Marras, R. Brescia, L. Goldoni, L. Manna, and M.P. Arciniegas, *Understanding and tailoring ligand interactions in the self-assembly of branched colloidal nanocrystals into planar superlattices.* Nature Communications, 2018. **9**.
34. Caligiuri, V., M. Palei, M. Imran, L. Manna, and R. Krahne, *Planar Double-Epsilon-Near-Zero Cavities for Spontaneous Emission and Purcell Effect Enhancement.* Acs Photonics, 2018. **5**(6): p. 2287-2294.
35. Almeida, G., L. Goldoni, Q. Akkerman, Z.Y. Dang, A.H. Khan, S. Marras, I. Moreels, and L. Manna, *Role of Acid-Base Equilibria in the Size, Shape, and Phase Control of Cesium Lead Bromide Nanocrystals.* Acs Nano, 2018. **12**(2): p. 1704-1711.
36. Almeida, G., O.J. Ashton, L. Goldoni, D. Maggioni, U. Petralanda, N. Mishra, Q.A. Akkerman, I. Infante, H.J. Snaith, and L. Manna, *The Phosphine Oxide Route toward Lead Halide Perovskite Nanocrystals.* Journal of the American Chemical Society, 2018. **140**(44): p. 14878-14886.
37. Akkerman, Q.A., G. Raino, M.V. Kovalenko, and L. Manna, *Genesis, challenges and opportunities for colloidal lead halide perovskite nanocrystals.* Nature Materials, 2018. **17**(5): p. 394-405.
38. Akkerman, Q.A., L. Martinez-Sarti, L. Goldoni, M. Imran, D. Baranov, H.J. Bolink, F. Palazon, and L. Manna, *Molecular Iodine for a General Synthesis of Binary and Ternary Inorganic and Hybrid Organic - Inorganic Iodide Nanocrystals.* Chemistry of Materials, 2018. **30**(19): p. 6915-6921.
39. Akkerman, Q.A., A.L. Abdelhady, and L. Manna, *Zero-Dimensional Cesium Lead Halides: History, Properties, and Challenges.* Journal of Physical Chemistry Letters, 2018. **9**(9): p. 2326-2337.
40. Xie, Y., W.H. Chen, G. Bertoni, I. Kriegel, M. Xiong, N. Li, M. Prato, A. Riedinger, A. Sathya, and L. Manna, *Tuning and Locking the Localized Surface Plasmon Resonances of CuS (Covellite) Nanocrystals by an Amorphous CuPdxS Shell.* Chemistry of Materials, 2017. **29**(4): p. 1716-1723.
41. Wu, C.Z., G. Bertoni, S. Marras, L. Manna, and M. Colombo, *Selective Fe Promotion on Au Nanoparticles: An Efficient Way to Activate Au/SiO2 Catalysts for the CO Oxidation Reaction.* Chemcatchem, 2017. **9**(15): p. 2952-2960.
42. Urso, C., M. Barawi, R. Gaspari, G. Sirigu, I. Kriegel, M. Zavelani-Rossi, F. Scotognella, M. Manca, M. Prato, L. De Trizio, and L. Manna, *Colloidal Synthesis of Bipolar Off-Stoichiometric Gallium Iron Oxide Spinel-Type Nanocrystals with Near-IR Plasmon Resonance.* Journal of the American Chemical Society, 2017. **139**(3): p. 1198-1206.

43. Shinde, D.V., L. De Trizio, Z.Y. Dang, M. Prato, R. Gaspari, and L. Manna, *Hollow and Porous Nickel Cobalt Perselenide Nanostructured Microparticles for Enhanced Electrocatalytic Oxygen Evolution.* Chemistry of Materials, 2017. **29**(16): p. 7032-7041.
44. Shamsi, J., P. Rastogi, V. Caligiuri, A.L. Abdelhady, D. Spirito, L. Manna, and R. Krahne, *Bright-Emitting Perovskite Films by Large-Scale Synthesis and Photoinduced Solid-State Transformation of CsPbBr3 Nanoplatelets.* Acs Nano, 2017. **11**(10): p. 10206-10213.
45. Santiago-Gonzalez, B., A. Monguzzi, V. Pinchetti, A. Casu, M. Prato, R. Lorenzi, M. Campione, N. Chiodini, C. Santambrogio, F. Meinardi, L. Manna, and S. Brovelli, *"Quantized" Doping of Individual Colloidal Nanocrystals Using Size-Focused Metal Quantum Clusters.* Acs Nano, 2017. **11**(6): p. 6233-6242.
46. Saldanha, P.L., V. Lesnyak, and L. Manna, *Large scale syntheses of colloidal nanomaterials.* Nano Today, 2017. **12**: p. 46-63.
47. Pietra, F., N. Kirkwood, L. De Trizio, A.W. Hoekstra, L. Kleibergen, N. Renaud, R. Koole, P. Baesjou, L. Manna, and A.J. Houtepen, *Ga for Zn Cation Exchange Allows for Highly Luminescent and Photostable InZnP-Based Quantum Dots.* Chemistry of Materials, 2017. **29**(12): p. 5192-5199.
48. Palazon, F., C. Urso, L. De Trizio, Q. Akkerman, S. Marras, F. Locardi, I. Nelli, M. Ferretti, M. Prato, and L. Manna, *Postsynthesis Transformation of Insulating Cs4PbBr6 Nanocrystals into Bright Perovskite CsPbBr3 through Physical and Chemical Extraction of CsBr.* Acs Energy Letters, 2017. **2**(10): p. 2445-2448.
49. Palazon, F., M. Prato, and L. Manna, *Writing on Nanocrystals: Patterning Colloidal Inorganic Nanocrystal Films through Irradiation-Induced Chemical Transformations of Surface Ligands.* Journal of the American Chemical Society, 2017. **139**(38): p. 13250-13259.
50. Palazon, F., S. Dogan, S. Marras, F. Locardi, I. Nelli, P. Rastogi, M. Ferretti, M. Prato, R. Krahne, and L. Manna, *From CsPbBr3 Nano-Inks to Sintered CsPbBr3-CsPb2Br5 Films via Thermal Annealing: Implications on Optoelectronic Properties.* Journal of Physical Chemistry C, 2017. **121**(21): p. 11956-11961.
51. Palazon, F., G. Almeida, Q.A. Akkerman, L. De Trizio, Z.Y. Dang, M. Prato, and L. Manna, *Changing the Dimensionality of Cesium Lead Bromide Nanocrystals by Reversible Postsynthesis Transformations with Amines.* Chemistry of Materials, 2017. **29**(10): p. 4167-4171.
52. Meinardi, F., Q.A. Akkerrnan, F. Bruni, S. Park, M. Mauri, Z.Y. Dang, L. Manna, and S. Brovelli, *Doped Halide Perovskite Nanocrystals for Reabsorption-Free Luminescent Solar Concentrators.* Acs Energy Letters, 2017. **2**(10): p. 2368-2377.
53. Lorenzon, M., L. Sortino, Q. Akkerman, S. Accornero, J. Pedrini, M. Prato, V. Pinchetti, F. Meinardi, L. Manna, and S. Brovelli, *Role of Nonradiative Defects and Environmental Oxygen on Exciton Recombination Processes in CsPbBr3 Perovskite Nanocrystals.* Nano Letters, 2017. **17**(6): p. 3844-3853.
54. Kriegel, I., F. Scotognella, and L. Manna, *Plasmonic doped semiconductor nanocrystals: Properties, fabrication, applications and perspectives.* Physics Reports-Review Section of Physics Letters, 2017. **674**: p. 1-52.
55. Guardia, P., S. Nitti, M.E. Materia, G. Pugliese, N. Yaacoub, J.M. Greneche, C. Lefevre, L. Manna, and T. Pellegrino, *Gold-iron oxide dimers for magnetic hyperthermia: the key role of chloride ions in the synthesis to boost the heating efficiency.* Journal of Materials Chemistry B, 2017. **5**(24): p. 4587-4594.
56. Gaspari, R., G. Della Valle, S. Ghosh, I. Kriegel, F. Scotognella, A. Cavalli, and L. Manna, *Quasi-Static Resonances in the Visible Spectrum from All-Dielectric Intermediate Band Semiconductor Nanocrystals.* Nano Letters, 2017. **17**(12): p. 7691-7695.

57. Garianoi, G., V. Lesnyak, R. Brescia, G. Bertoni, Z.Y. Dang, R. Gaspari, L. De Trizio, and L. Manna, *Role of the Crystal Structure in Cation Exchange Reactions Involving Colloidal Cu2Se Nanocrystals.* Journal of the American Chemical Society, 2017. **139**(28): p. 9583-9590.
58. Distaso, M., G. Bertoni, S. Todisco, S. Marras, V. Gallo, L. Manna, and W. Peukert, *Interplay of Internal Structure and Interfaces on the Emitting Properties of Hybrid ZnO Hierarchical Particles.* Acs Applied Materials & Interfaces, 2017. **9**(17): p. 15182-15191.
59. Di Stasio, F., M. Imran, Q.A. Akkerman, M. Prato, L. Manna, and R. Krahne, *Reversible Concentration-Dependent Photoluminescence Quenching and Change of Emission Color in CsPbBr3 Nanowires and Nanoplatelets.* Journal of Physical Chemistry Letters, 2017. **8**(12): p. 2725-2729.
60. Destro, P., S. Marras, L. Manna, M. Colombo, and D. Zanchet, *AuCu alloy nanoparticles supported on SiO2: Impact of redox pretreatments in the catalyst performance in CO oxidation.* Catalysis Today, 2017. **282**: p. 105-110.
61. Dang, Z.Y., J. Shamsi, F. Palazon, M. Imran, Q.A. Akkerman, S. Park, G. Bertoni, M. Prato, R. Brescia, and L. Manna, *In Situ Transmission Electron Microscopy Study of Electron Beam-Induced Transformations in Colloidal Cesium Lead Halide Perovskite Nanocrystals.* Acs Nano, 2017. **11**(2): p. 2124-2132.
62. Dang, Z.Y., J. Shamsi, Q.A. Akkerman, M. Imran, G. Bertoni, R. Brescia, and L. Manna, *Low-Temperature Electron Beam-Induced Transformations of Cesium Lead Halide Perovskite Nanocrystals.* Acs Omega, 2017. **2**(9): p. 5660-5665.
63. Buha, J. and L. Manna, *Solid State Intercalation, Deintercalation, and Cation Exchange in Colloidal 2D Bi2Se3 and Bi2Te3 Nanocrystals.* Chemistry of Materials, 2017. **29**(3): p. 1419-1429.
64. Barawi, M., L. De Trizio, R. Giannuzzi, G. Veramonti, L. Manna, and M. Manca, *Dual Band Electrochromic Devices Based on Nb-Doped TiO2 Nanocrystalline Electrodes.* Acs Nano, 2017. **11**(4): p. 3576-3584.
65. Arciniegas, M.P., A. Castelli, S. Piazza, S. Dogan, L. Ceseracciu, R. Krahne, M. Duocastella, and L. Manna, *Laser-Induced Localized Growth of Methylammonium Lead Halide Perovskite Nano- and Microcrystals on Substrates.* Advanced Functional Materials, 2017. **27**(34).
66. Almeida, G., S. Dogan, G. Bertoni, C. Giannini, R. Gaspari, S. Perissinotto, R. Krahne, S. Ghosh, and L. Manna, *Colloidal Monolayer beta-In2Se3 Nanosheets with High Photoresponsivity.* Journal of the American Chemical Society, 2017. **139**(8): p. 3005-3011.
67. Akkerman, Q.A., S. Park, E. Radicchi, F. Nunzi, E. Mosconi, F. De Angelis, R. Brescia, P. Rastogi, M. Prato, and L. Manna, *Nearly Monodisperse Insulator Cs4PbX6 (X = Cl, Br, I) Nanocrystals, Their Mixed Halide Compositions, and Their Transformation into CsPbX3 Nanocrystals.* Nano Letters, 2017. **17**(3): p. 1924-1930.
68. Akkerman, Q.A., D. Meggiolaro, Z.Y. Dang, F. De Angelis, and L. Manna, *Fluorescent Alloy CsPbxMn1-x,I-3 Perovskite Nanocrystals with High Structural and Optica Stability.* Acs Energy Letters, 2017. **2**(9): p. 2183-2186.
69. Akkerman, Q.A., M. Gandini, F. Di Stasio, P. Rastogi, F. Palazon, G. Bertoni, J.M. Ball, M. Prato, A. Petrozza, and L. Manna, *Strongly emissive perovskite nanocrystal inks for high-voltage solar cells.* Nature Energy, 2017. **2**(2).
70. Accornero, S., M. Arciniegas, M. Prato, S. Marras, and L. Manna, *Thin films of methylammonium lead halide perovskite via hydrolysis of N-methylformamide as source of methylammonium ions.* Abstracts of Papers of the American Chemical Society, 2017. **253**.
71. Wu, C.Z., R. Brescia, M. Prato, S. Marras, L. Manna, and M. Colombo, *Tuning the CO oxidation catalytic activity of supported metal-metal oxide heterostructures by an aqueous phase post-treatment process.* Journal of Materials Chemistry A, 2016. **4**(46): p. 18075-18083.

72. Vikulov, S., F. Di Stasio, L. Ceseracciu, P.L. Saldanha, A. Scarpellini, Z.Y. Dang, R. Krahne, L. Manna, and V. Lesnyak, *Fully Solution-Processed Conductive Films Based on Colloidal Copper Selenide Nanosheets for Flexible Electronics.* Advanced Functional Materials, 2016. **26**(21): p. 3670-3677.
73. Tu, R.Y., Y. Xie, G. Bertoni, A. Lak, R. Gaspari, A. Rapallo, A. Cavalli, L. De Trizio, and L. Manna, *Influence of the Ion Coordination Number on Cation Exchange Reactions with Copper Telluride Nanocrystals.* Journal of the American Chemical Society, 2016. **138**(22): p. 7082-7090.
74. Sutter, E., P. Sutter, A.V. Tkachenko, R. Krahne, J. de Graaf, M. Arciniegas, and L. Manna, *In situ microscopy of the self-assembly of branched nanocrystals in solution.* Nature Communications, 2016. **7**.
75. Sun, H.Y., A.E.D. Castillo, S. Monaco, A. Capasso, A. Ansaldo, M. Prato, D.A. Dinh, V. Pellegrini, B. Scrosati, L. Manna, and F. Bonaccorso, *Binder-free graphene as an advanced anode for lithium batteries.* Journal of Materials Chemistry A, 2016. **4**(18): p. 6886-6895.
76. Shamsi, J., Z.Y. Dang, P. Bianchini, C. Canale, F. Di Stasio, R. Brescia, M. Prato, and L. Manna, *Colloidal Synthesis of Quantum Confined Single Crystal CsPbBr3 Nanosheets with Lateral Size Control up to the Micrometer Range.* Journal of the American Chemical Society, 2016. **138**(23): p. 7240-7243.
77. Shamsi, J., A.L. Abdelhady, S. Accornero, M. Arciniegas, L. Goldoni, A.R.S. Kandada, A. Petrozza, and L. Manna, *N-Methylformamide as a Source of Methylammonium Ions in the Synthesis of Lead Halide Perovskite Nanocrystals and Bulk Crystals.* Acs Energy Letters, 2016. **1**(5): p. 1042-1048.
78. Sathya, A., P. Guardia, R. Brescia, N. Silyestri, G. Pugliese, S. Nitti, L. Manna, and T. Pellegrino, *CoxFe3-xO4 Nanocubes for Theranostic Applications: Effect of Cobalt Content and Particle Size.* Chemistry of Materials, 2016. **28**(6): p. 1769-1780.
79. Pinchetti, V., F. Meinardi, A. Camellini, G. Sirigu, S. Christodoulou, W.K. Bae, F. De Donato, L. Manna, M. Zavelani-Rossi, I. Moreels, V.I. Klimov, and S. Brovelli, *Effect of Core/Shell Interface on Carrier Dynamics and Optical Gain Properties of Dual-Color Emitting CdSe/CdS Nanocrystals.* ACS Nano, 2016. **10**(7): p. 6877-6887.
80. Pietra, F., L. De Trizio, A.W. Hoekstra, N. Renaud, M. Prato, F.C. Grozema, P.J. Baesjou, R. Koole, L. Manna, and A.J. Houtepen, *Tuning the Lattice Parameter of InxZnyP for Highly Luminescent Lattice-Matched Core/Shell Quantum Dots.* Acs Nano, 2016. **10**(4): p. 4754-4762.
81. Paolella, A., S. Turner, G. Bertoni, P. Hovington, R. Flacau, C. Boyer, Z.M. Feng, M. Colombo, S. Marras, M. Prato, L. Manna, A. Guerfi, G.P. Demopoulos, M. Armand, and K. Zaghib, *Accelerated Removal of Fe-Antisite Defects while Nanosizing Hydrothermal LiFePO4 with Ca2+.* Nano Letters, 2016. **16**(4): p. 2692-2697.
82. Palazon, F., F. Di Stasio, S. Lauciello, R. Krahne, M. Prato, and L. Manna, *Evolution of CsPbBr3 nanocrystals upon post-synthesis annealing under an inert atmosphere.* Journal of Materials Chemistry C, 2016. **4**(39): p. 9179-9182.
83. Palazon, F., F. Di Stasio, Q.A. Akkerman, R. Krahne, M. Prato, and L. Manna, *Polymer-Free Films of Inorganic Halide Perovskite Nanocrystals as UV-to-White Color-Conversion Layers in LEDs.* Chemistry of Materials, 2016. **28**(9): p. 2902-2906.
84. Palazon, F., Q.A. Akkerman, M. Prato, and L. Manna, *X-ray Lithography on Perovskite Nanocrystals Films: From Patterning with Anion-Exchange Reactions to Enhanced Stability in Air and Water.* Acs Nano, 2016. **10**(1): p. 1224-1230.
85. Najafishirtari, S., T.M. Kokumai, S. Marras, P. Destro, M. Prato, A. Scarpellini, R. Brescia, A. Lak, T. Pellegrino, D. Zanchet, L. Manna, and M. Colombo, *Dumbbell-like Au0.5Cu0.5@Fe3O4 Nanocrystals: Synthesis, Characterization, and Catalytic Activity in CO Oxidation.* Acs Applied Materials & Interfaces, 2016. **8**(42): p. 28624-28632.

86. Najafishirtari, S., P. Guardia, A. Scarpellini, M. Prato, S. Marras, L. Manna, and M. Colombo, *The effect of Au domain size on the CO oxidation catalytic activity of colloidal Au-FeOx dumbbell-like heterodimers.* Journal of Catalysis, 2016. **338**: p. 115-123.
87. Kuno, M., L. Manna, and N. Pradhan, *Beyond Conventional Quantum Dots.* Chemphyschem, 2016. **17**(5): p. 553-554.
88. Kriegel, I., C. Urso, D. Viola, L. De Trizio, F. Scotognella, G. Cerullo, and L. Manna, *Ultrafast Photodoping and Plasmon Dynamics in Fluorine Indium Codoped Cadmium Oxide Nanocrystals for All-Optical Signal Manipulation at Optical Communication Wavelengths.* Journal of Physical Chemistry Letters, 2016. **7**(19): p. 3873-3881.
89. Kandada, A.R.S., S. Neutzner, V. D'Innocenzo, F. Tassone, M. Gandini, Q.A. Akkerman, M. Prato, L. Manna, A. Petrozza, and G. Lanzani, *Nonlinear Carrier Interactions in Lead Halide Perovskites and the Role of Defects.* Journal of the American Chemical Society, 2016. **138**(41): p. 13604-13611.
90. Imran, M., F. Di Stasio, Z.Y. Dang, C. Canale, A.H. Khan, J. Shamsi, R. Brescia, M. Prato, and L. Manna, *Colloidal Synthesis of Strongly Fluorescent CsPbBr3 Nanowires with Width Tunable down to the Quantum Confinement Regime.* Chemistry of Materials, 2016. **28**(18): p. 6450-6454.
91. Ghosh, S., T. Avellini, A. Petrelli, I. Kriegel, R. Gaspari, G. Almeida, G. Bertoni, A. Cavalli, F. Scotognella, T. Pellegrino, and L. Manna, *Colloidal CuFeS2 Nanocrystals: Intermediate Fe d-Band Leads to High Photothermal Conversion Efficiency.* Chemistry of Materials, 2016. **28**(13): p. 4848-4858.
92. Gaspari, R., F. Labat, L. Manna, C. Adamo, and A. Cavalli, *Semiconducting and optical properties of selected binary compounds by linear response DFT plus U and hybrid functional methods.* Theoretical Chemistry Accounts, 2016. **135**(3).
93. Destro, P., M. Colombo, M. Prato, R. Brescia, L. Manna, and D. Zanchet, *Au1-xCux colloidal nanoparticles synthesized via a one-pot approach: understanding the temperature effect on the Au : Cu ratio.* Rsc Advances, 2016. **6**(27): p. 22213-22221.
94. De Trizio, L. and L. Manna, *Forging Colloidal Nanostructures via Cation Exchange Reactions.* Chemical Reviews, 2016. **116**(18): p. 10852-10887.
95. De Caro, L., D. Altamura, M. Arciniegas, D. Siliqi, M.R. Kim, T. Sibillano, L. Manna, and C. Giannini, *Ptychographic Imaging of Branched Colloidal Nanocrystals Embedded in Free-Standing Thick Polystyrene Films.* Scientific Reports, 2016. **6**.
96. Chen, L., E. Dilena, A. Paolella, G. Bertoni, A. Ansaldo, M. Colombo, S. Marras, B. Scrosati, L. Manna, and S. Monaco, *Relevance of LiPF6 as Etching Agent of LiMnPO4 Colloidal Nanocrystals for High Rate Performing Li-ion Battery Cathodes.* Acs Applied Materials & Interfaces, 2016. **8**(6): p. 4069-4075.
97. Casu, A., A. Genovese, L. Manna, P. Longo, J. Buha, G.A. Botton, S. Lazar, M. Upadhyay, U. Schwingenschlogl, M. Prato, H.B. Li, S. Ghosh, F. Palazon, F. De Donato, S.L. Mozo, E. Zuddas, and A. Falqui, *Cu2Se and Cu Nanocrystals as Local Sources of Copper in Thermally Activated In Situ Cation Exchange.* Acs Nano, 2016. **10**(2): p. 2406-2414.
98. Castelli, A., J. de Graaf, M. Prato, L. Manna, and M.P. Arciniegas, *Tic-Tac-Toe Binary Lattices from the Interfacial Self-Assembly of Branched and Spherical Nanocrystals.* Acs Nano, 2016. **10**(4): p. 4345-4353.
99. Castelli, A., J. de Graaf, M. Prato, L. Manna, and M. Arciniegas, *Tic-tac-toe binary lattices from interfacial self-assembly of branched and spherical nanocrystals.* Abstracts of Papers of the American Chemical Society, 2016. **252**.
100. Buha, J., R. Gaspari, A.E.D. Castillo, F. Bonaccorso, and L. Manna, *Thermal Stability and Anisotropic Sublimation of Two-Dimensional Colloidal Bi2Te3 and Bi2Se3 Nanocrystals.* Nano Letters, 2016. **16**(7): p. 4217-4223.

101. Arciniegas, M.P., F. Di Stasio, H.B. Li, D. Altamura, L. De Trizio, M. Prato, A. Scarpellini, I. Moreels, R. Krahne, and L. Manna, *Self-Assembled Dense Colloidal Cu2Te Nanodisk Networks in P3HT Thin Films with Enhanced Photocurrent.* Advanced Functional Materials, 2016. **26**(25): p. 4535-4542.
102. Arciniegas, M.P., A. Castelli, L. Ceseracciu, P. Bianchini, S. Marras, R. Brescia, and L. Manna, *Assembly of Branched Colloidal Nanocrystals in Polymer Films Leads to Enhanced Viscous Deformation Resistance.* Nano Letters, 2016. **16**(10): p. 6154-6163.
103. Akkerman, Q.A., S.G. Motti, A.R.S. Kandada, E. Mosconi, V. D'Innocenzo, G. Bertoni, S. Marras, B.A. Kamino, L. Miranda, F. De Angelis, A. Petrozza, M. Prato, and L. Manna, *Solution Synthesis Approach to Colloidal Cesium Lead Halide Perovskite Nanoplatelets with Monolayer-Level Thickness Control.* Journal of the American Chemical Society, 2016. **138**(3): p. 1010-1016.
104. Xie, Y., G. Bertoni, A. Riedinger, A. Sathya, M. Prato, S. Marras, R.Y. Tu, T. Pellegrino, and L. Manna, *Nanoscale Transformations in Covellite (CuS) Nanocrystals in the Presence of Divalent Metal Cations in a Mild Reducing Environment.* Chemistry of Materials, 2015. **27**(21): p. 7531-7537.
105. Wang, S.H., A. Riedinger, H.B. Li, C.H. Fu, H.Y. Liu, L.L. Li, T.L. Liu, L.F. Tan, M.J. Barthel, G. Pugliese, F. De Donato, M.S. D'Abbusco, X.W. Meng, L. Manna, H. Meng, and T. Pellegrino, *Plasmonic Copper Sulfide Nanocrystals Exhibiting Near-Infrared Photothermal and Photodynamic Therapeutic Effects.* Acs Nano, 2015. **9**(2): p. 1788-1800.
106. Toma, A., S. Tuccio, M. Prato, F. De Donato, A. Perucchi, P. Di Pietro, S. Marras, C. Liberale, R.P. Zaccaria, F. De Angelis, L. Manna, S. Lupi, E. Di Fabrizio, and L. Razzari, *Squeezing Terahertz Light into Nanovolumes: Nanoantenna Enhanced Terahertz Spectroscopy (NETS) of Semiconductor Quantum Dots.* Nano Letters, 2015. **15**(1): p. 386-391.
107. Tao, C., S. Neutzner, L. Colella, S. Marras, A.R.S. Kandada, M. Gandini, M. De Bastiani, G. Pace, L. Manna, M. Caironi, C. Bertarelli, and A. Petrozza, *17.6% stabilized efficiency in low-temperature processed planar perovskite solar cells.* Energy & Environmental Science, 2015. **8**(8): p. 2365-2370.
108. Riedinger, A., T. Avellini, A. Curcio, M. Asti, Y. Xie, R.Y. Tu, S. Marras, A. Lorenzon, S. Rubagotti, M. Iori, P.C. Capponi, A. Versari, L. Manna, E. Seregn, and T. Pellegrino, *Post-Synthesis Incorporation of Cu-64 in CuS Nanocrystals to Radio label Photothermal Probes: A Feasible Approach for Clinics.* Journal of the American Chemical Society, 2015. **137**(48): p. 15145-15151.
109. Paolella, A., G. Bertoni, P. Hovington, Z.M. Feng, R. Flacau, M. Prato, M. Colombo, S. Marras, L. Manna, S. Turner, G. Van Tendeloo, A. Guerfi, G.P. Demopoulos, and K. Zaghib, *Cation exchange mediated elimination of the Fe-antisites in the hydrothermal synthesis of LiFePO4.* Nano Energy, 2015. **16**: p. 256-267.
110. Najafishirtari, S., R. Brescia, P. Guardia, S. Marras, L. Manna, and M. Colombo, *Nanoscale Transformations of Alumina-Supported AuCu Ordered Phase Nanocrystals and Their Activity in CO Oxidation.* Acs Catalysis, 2015. **5**(4): p. 2154-2163.
111. Miszta, K., G. Gariano, R. Brescia, S. Marras, F. De Donato, S. Ghosh, L. De Trizio, and L. Manna, *Selective Cation Exchange in the Core Region of Cu2-xSe/Cu2-xS Core/Shell Nanocrystals.* Journal of the American Chemical Society, 2015. **137**(38): p. 12195-12198.
112. Manna, L., *Chemical and structural transformations in colloidal inorganic nanocrystals.* Abstracts of Papers of the American Chemical Society, 2015. **249**.
113. Lesnyak, V., R. Brescia, G.C. Messina, and L. Manna, *Cu Vacancies Boost Cation Exchange Reactions in Copper Selenide Nanocrystals.* Journal of the American Chemical Society, 2015. **137**(29): p. 9315-9323.
114. Kovalenko, M.V., L. Manna, A. Cabot, Z. Hens, D.V. Talapin, C.R. Kagan, V.I. Klimov, A.L. Rogach, P. Reiss, D.J. Milliron, P. Guyot-Sionnnest, G. Konstantatos, W.J. Parak, T. Hyeon, B.A. Korgel,

C.B. Murray, and W. Heiss, *Prospects of Nanoscience with Nanocrystals.* Acs Nano, 2015. **9**(2): p. 1012-1057.

115. Hyeon, T., L. Manna, and S.S. Wong, *Sustainable nanotechnology.* Chemical Society Reviews, 2015. **44**(16): p. 5755-5757.
116. Grim, J.Q., L. Manna, and I. Moreels, *A sustainable future for photonic colloidal nanocrystals.* Chemical Society Reviews, 2015. **44**(16): p. 5897-5914.
117. Goriparti, S., E. Miele, M. Prato, A. Scarpellini, S. Marras, S. Monaco, A. Toma, G.C. Messina, A. Alabastri, F. De Angelis, L. Manna, C. Capiglia, and R.P. Zaccaria, *Direct Synthesis of Carbon-Doped TiO2-Bronze Nanowires as Anode Materials for High Performance Lithium-Ion Batteries.* Acs Applied Materials & Interfaces, 2015. **7**(45): p. 25139-25146.
118. Ghosh, S., R. Gaspari, G. Bertoni, M.C. Spadaro, M. Prato, S. Turner, A. Cavalli, L. Manna, and R. Brescia, *Pyramid-Shaped Wurtzite CdSe Nanocrystals with Inverted Polarity.* Acs Nano, 2015. **9**(8): p. 8537-8546.
119. Di Stasio, F., J.Q. Grim, V. Lesnyak, P. Rastogi, L. Manna, I. Moreels, and R. Krahne, *Single-Mode Lasing from Colloidal Water-Soluble CdSe/CdS Quantum Dot-in-Rods.* Small, 2015. **11**(11): p. 1328-1334.
120. De Trizio, L., R. Gaspari, G. Bertoni, I. Kriegel, L. Moretti, F. Scotognella, L. Maserati, Y. Zhang, G.C. Messina, M. Prato, S. Marras, A. Cavalli, and L. Manna, *Cu3-x,P Nanocrystals as a Material Platform for Near-Infrared Plasmonics and Cation Exchange Reactions.* Chemistry of Materials, 2015. **27**(3): p. 1120-1128.
121. Corrias, A., E. Conca, G. Cibin, G. Mountjoy, D. Gianolio, F. De Donato, L. Manna, and M.F. Casula, *Insights into the Structure of Dot@Rod and Dot@Octapod CdSe@CdS Heterostructures.* Journal of Physical Chemistry C, 2015. **119**(28): p. 16338-16348.
122. Christodoulou, S., F. Rajadell, A. Casu, G. Vaccaro, J.Q. Grim, A. Genovese, L. Manna, J.I. Climente, F. Meinardi, G. Raino, T. Stoferle, R.F. Mahrt, J. Planelles, S. Brovelli, and I. Moreels, *Band structure engineering via piezoelectric fields in strained anisotropic CdSe/CdS nanocrystals.* Nature Communications, 2015. **6**.
123. Chavan, A.A., H.B. Li, A. Scarpellini, S. Marras, L. Manna, A. Athanassiou, and D. Fragouli, *Elastomeric Nanocomposite Foams for the Removal of Heavy Metal Ions from Water.* Acs Applied Materials & Interfaces, 2015. **7**(27): p. 14778-14784.
124. Castelli, A., F. Meinardi, M. Pasini, F. Galeotti, V. Pinchetti, M. Lorenzon, L. Manna, I. Moreels, U. Giovanella, and S. Brovelli, *High-Efficiency All-Solution-Processed Light-Emitting Diodes Based on Anisotropic Colloidal Heterostructures with Polar Polymer Injecting Layers.* Nano Letters, 2015. **15**(8): p. 5455-5464.
125. Bigall, N.C., E. Dilena, D. Dorfs, M.L. Beoutis, G. Pugliese, C. Wilhelm, F. Gazeau, A.A. Khan, A.M. Bittner, M.A. Garcia, M. Garcia-Hernandez, L. Manna, and T. Pellegrino, *Hollow Iron Oxide Nanoparticles in Polymer Nanobeads as MRI Contrast Agents.* Journal of Physical Chemistry C, 2015. **119**(11): p. 6246-6253.
126. Akkerman, Q.A., A. Genovese, C. George, M. Prato, I. Moreels, A. Casu, S. Marras, A. Curcio, A. Scarpellini, T. Pellegrino, L. Manna, and V. Lesnyak, *From Binary Cu2S to Ternary Cu-In-S and Quaternary Cu-In-Zn-S Nanocrystals with Tunable Composition via Partial Cation Exchange.* Acs Nano, 2015. **9**(1): p. 521-531.
127. Akkerman, Q.A., V. D'Innocenzo, S. Accornero, A. Scarpellini, A. Petrozza, M. Prato, and L. Manna, *Tuning the Optical Properties of Cesium Lead Halide Perovskite Nanocrystals by Anion Exchange Reactions.* Journal of the American Chemical Society, 2015. **137**(32): p. 10276-10281.
128. Verrelli, R., R. Brescia, A. Scarpellini, L. Manna, B. Scrosati, and J. Hassoun, *A lithium ion battery exploiting a composite Fe2O3 anode and a high voltage Li1.35Ni0.48Fe0.1Mn1.72O4 cathode.* Rsc Advances, 2014. **4**(106): p. 61855-61862.

129. Saldanha, P.L., R. Brescia, M. Prato, H.B. Li, M. Povia, L. Manna, and V. Lesnyak, *Generalized One-Pot Synthesis of Copper Sulfide, Selenide-Sulfide, and Telluride-Sulfide Nanoparticles.* Chemistry of Materials, 2014. **26**(3): p. 1442-1449.
130. Paolella, A., G. Bertoni, S. Marras, E. Dilena, M. Colombo, M. Prato, A. Riedinger, M. Povia, A. Ansaldo, K. Zaghib, L. Manna, and C. George, *Etched Colloidal LiFePO4 Nanoplatelets toward High-Rate Capable Li-Ion Battery Electrodes.* Nano Letters, 2014. **14**(12): p. 6828-6835.
131. Paolella, A., G. Bertoni, E. Dilena, S. Marras, A. Ansaldo, L. Manna, and C. George, *Redox Centers Evolution in Phospho-Olivine Type (LiFe0.5Mn0.5 PO4) Nanoplatelets with Uniform Cation Distribution.* Nano Letters, 2014. **14**(3): p. 1477-1483.
132. Miszta, K., F. Greullet, S. Marras, M. Prato, A. Toma, M. Arciniegas, L. Manna, and R. Krahne, *Nanocrystal Film Patterning by Inhibiting Cation Exchange via Electron-Beam or X-ray Lithography.* Nano Letters, 2014. **14**(4): p. 2116-2122.
133. Miszta, K., R. Brescia, M. Prato, G. Bertoni, S. Marras, Y. Xie, S. Ghosh, M.R. Kim, and L. Manna, *Hollow and Concave Nanoparticles via Preferential Oxidation of the Core in Colloidal Core/Shell Nanocrystals.* Journal of the American Chemical Society, 2014. **136**(25): p. 9061-9069.
134. Maserati, L., I. Moreels, M. Prato, R. Krahne, L. Manna, and Y. Zhang, *Oxygen Sensitivity of Atomically Passivated CdS Nanocrystal Films.* Acs Applied Materials & Interfaces, 2014. **6**(12): p. 9517-9523.
135. Lesnyak, V., C. George, A. Genovese, M. Prato, A. Casu, S. Ayyappan, A. Scarpellini, and L. Manna, *Alloyed Copper Chalcogenide Nanoplatelets via Partial Cation Exchange Reactions.* Acs Nano, 2014. **8**(8): p. 8407-8418.
136. Kostopoulou, A., K. Brintakis, M. Vasilakaki, K.N. Trohidou, A.P. Douvalis, A. Lascialfari, L. Manna, and A. Lappas, *Assembly-mediated interplay of dipolar interactions and surface spin disorder in colloidal maghemite nanoclusters.* Nanoscale, 2014. **6**(7): p. 3764-3776.
137. Guardia, P., A. Riedinger, S. Nitti, G. Pugliese, S. Marras, A. Genovese, M.E. Materia, C. Lefevre, L. Manna, and T. Pellegrino, *One pot synthesis of monodisperse water soluble iron oxide nanocrystals with high values of the specific absorption rate.* Journal of Materials Chemistry B, 2014. **2**(28): p. 4426-4434.
138. Grim, J.Q., S. Christodoulou, F. Di Stasio, R. Krahne, R. Cingolani, L. Manna, and I. Moreels, *Continuous-wave biexciton lasing at room temperature using solution-processed quantum wells.* Nature Nanotechnology, 2014. **9**(11): p. 891-895.
139. Grancini, G., S. Marras, M. Prato, C. Giannini, C. Quarti, F. De Angelis, M. De Bastiani, G.E. Eperon, H.J. Snaith, L. Manna, and A. Petrozza, *The Impact of the Crystallization Processes on the Structural and Optical Properties of Hybrid Perovskite Films for Photovoltaics.* Journal of Physical Chemistry Letters, 2014. **5**(21): p. 3836-3842.
140. Gaspari, R., L. Manna, and A. Cavalli, *A theoretical investigation of the (0001) covellite surfaces.* Journal of Chemical Physics, 2014. **141**(4).
141. De Trizio, L., H.B. Li, A. Casu, A. Genovese, A. Sathya, G.C. Messina, and L. Manna, *Sn Cation Valency Dependence in Cation Exchange Reactions Involving Cu2-xSe Nanocrystals.* Journal of the American Chemical Society, 2014. **136**(46): p. 16277-16284.
142. Conca, E., M. Aresti, M. Saba, M.F. Casula, F. Quochi, G. Mula, D. Loche, M.R. Kim, L. Manna, A. Corrias, A. Mura, and G. Bongiovanni, *Charge separation in Pt-decorated CdSe@CdS octapod nanocrystals.* Nanoscale, 2014. **6**(4): p. 2238-2243.
143. Comin, A. and L. Manna, *New materials for tunable plasmonic colloidal nanocrystals.* Chemical Society Reviews, 2014. **43**(11): p. 3957-3975.
144. Chushkin, Y., F. Zontone, E. Lima, L. De Caro, P. Guardia, L. Manna, and C. Giannini, *Three-dimensional coherent diffractive imaging on non-periodic specimens at the ESRF beamline ID10.* Journal of Synchrotron Radiation, 2014. **21**: p. 594-599.

145. Christodoulou, S., G. Vaccaro, V. Pinchetti, F. De Donato, J.Q. Grim, A. Casu, A. Genovese, G. Vicidomini, A. Diaspro, S. Brovelli, L. Manna, and I. Moreels, *Synthesis of highly luminescent wurtzite CdSe/CdS giant-shell nanocrystals using a fast continuous injection route.* Journal of Materials Chemistry C, 2014. **2**(17): p. 3439-3447.
146. Arciniegas, M.P., M.R. Kim, J. De Graaf, R. Brescia, S. Marras, K. Miszta, M. Dijkstra, R. van Roij, and L. Manna, *Self-Assembly of Octapod-Shaped Colloidal Nanocrystals into a Hexagonal Ballerina Network Embedded in a Thin Polymer Film.* Nano Letters, 2014. **14**(2): p. 1056-1063.
147. Zhang, Y., K. Miszta, L. Manna, E. Di Fabrizio, and R. Krahne, *Cold field emission dominated photoconductivity in ordered three-dimensional assemblies of octapod-shaped CdSe/CdS nanocrystals.* Nanoscale, 2013. **5**(16): p. 7596-7600.
148. Zanella, M., L. Maserati, M.P. Leal, M. Prato, R. Lavieville, M. Povia, R. Krahne, and L. Manna, *Atomic Ligand Passivation of Colloidal Nanocrystal Films via their Reaction with Propyltrichlorosilane.* Chemistry of Materials, 2013. **25**(8): p. 1423-1429.
149. Xie, Y., A. Riedinger, M. Prato, A. Casu, A. Genovese, P. Guardia, S. Sottini, C. Sangregorio, K. Miszta, S. Ghosh, T. Pellegrino, and L. Manna, *Copper Sulfide Nanocrystals with Tunable Composition by Reduction of Covellite Nanocrystals with Cu+ Ions.* Journal of the American Chemical Society, 2013. **135**(46): p. 17630-17637.
150. Rippa, M., R. Capasso, P. Mormile, S. De Nicola, M. Zanella, L. Manna, G. Nenna, and L. Petti, *Bragg extraction of light in 2D photonic Thue-Morse quasicrystals patterned in active CdSe/CdS nanorod-polymer nanocomposites.* Nanoscale, 2013. **5**(1): p. 331-336.
151. Riedinger, A., P. Guardia, A. Curcio, M.A. Garcia, R. Cingolani, L. Manna, and T. Pellegrino, *Subnanometer Local Temperature Probing and Remotely Controlled Drug Release Based on Azo-Functionalized Iron Oxide Nanoparticles.* Nano Letters, 2013. **13**(6): p. 2399-2406.
152. Qi, W.K., J. de Graaf, F. Qiao, S. Marras, L. Manna, and M. Dijkstra, *Phase diagram of octapod-shaped nanocrystals in a quasi-two-dimensional planar geometry.* Journal of Chemical Physics, 2013. **138**(15).
153. Pisanello, F., L. Martiradonna, L. Sileo, V. Brunetti, G. Vecchio, M.A. Malvindi, G. Morello, M. Zanella, P.P. Pompa, L. Manna, and M. De Vittorio, *Highly luminescent, flexible and biocompatible cadmium-based nanocomposites.* Microelectronic Engineering, 2013. **111**: p. 299-303.
154. Pisanello, F., R. De Paolis, D. Lorenzo, S. Nitti, G. Monti, D. Fragouli, A. Athanassiou, L. Manna, L. Tarricone, M. De Vittorio, and L. Martiradonna, *Radiofrequency characterization of polydimethylsiloxane - iron oxide based nanocomposites.* Microelectronic Engineering, 2013. **111**: p. 46-51.
155. Pisanello, F., R. De Paolis, D. Lorenzo, P. Guardia, S. Nitti, G. Monti, D. Fragouli, A. Athanassiou, L. Tarricone, L. Manna, M. De Vittorio, and L. Martiradonna, *GHz Properties of Magnetophoretically Aligned Iron-Oxide Nanoparticle Doped Polymers.* Acs Applied Materials & Interfaces, 2013. **5**(8): p. 2908-2914.
156. Paolella, A., R. Brescia, M. Prato, M. Povia, S. Marras, L. De Trizio, A. Falqui, L. Manna, and C. George, *Colloidal Synthesis of Cuprite (Cu2O) Octahedral Nanocrystals and Their Electrochemical Lithiation.* Acs Applied Materials & Interfaces, 2013. **5**(7): p. 2745-2751.
157. Manna, L., *Colloidal inorganic nanocrystals: From synthesis, to assembly, to the study of their transformations.* Abstracts of Papers of the American Chemical Society, 2013. **246**.
158. Li, H.B., A.G. Kanaras, and L. Manna, *Colloidal Branched Semiconductor Nanocrystals: State of the Art and Perspectives.* Accounts of Chemical Research, 2013. **46**(7): p. 1387-1396.
159. Li, H.B., R. Brescia, M. Povia, M. Prato, G. Bertoni, L. Manna, and I. Moreels, *Synthesis of Uniform Disk-Shaped Copper Telluride Nanocrystals and Cation Exchange to Cadmium Telluride Quantum*

Disks with Stable Red Emission. Journal of the American Chemical Society, 2013. **135**(33): p. 12270-12278.

160. Kunneman, L.T., M. Zanella, L. Manna, L.D.A. Siebbeles, and J.M. Schins, *Mobility and Spatial Distribution of Photoexcited Electrons in CdSe/CdS Nanorods.* Journal of Physical Chemistry C, 2013. **117**(6): p. 3146-3151.
161. Guardia, P., K. Korobchevskaya, A. Casu, A. Genovese, L. Manna, and A. Comin, *Plasmon Dynamics in Colloidal Au2Cd Alloy-CdSe Core/Shell Nanocrystals.* Acs Nano, 2013. **7**(2): p. 1045-1053.
162. Grivas, C., C.Y. Li, P. Andreakou, P.F. Wang, M. Ding, G. Brambilla, L. Manna, and P. Lagoudakis, *Single-mode tunable laser emission in the single-exciton regime from colloidal nanocrystals.* Nature Communications, 2013. **4**.
163. George, C., A. Genovese, A. Casu, M. Prato, M. Povia, L. Manna, and T. Montanari, *CO Oxidation on Colloidal Au0.80Pd0.20-FexOy Dumbbell Nanocrystals.* Nano Letters, 2013. **13**(2): p. 752-757.
164. Dilena, E., Y. Xie, R. Brescia, M. Prato, L. Maserati, R. Krahne, A. Paolella, G. Bertoni, M. Povia, I. Moreels, and L. Manna, *CuInxGa1-xS2 Nanocrystals with Tunable Composition and Band Gap Synthesized via a Phosphine-Free and Scalable Procedure.* Chemistry of Materials, 2013. **25**(15): p. 3180-3187.
165. Della Valle, G., F. Scotognella, A.R.S. Kandada, M. Zavelani-Rossi, H.B. Li, M. Conforti, S. Longhi, L. Manna, G. Lanzani, and F. Tassone, *Ultrafast Optical Mapping of Nonlinear Plasmon Dynamics in Cu2-xSe Nanoparticles.* Journal of Physical Chemistry Letters, 2013. **4**(19): p. 3337-3344.
166. De Trizio, L., F. De Donato, A. Casu, A. Genovese, A. Falqui, M. Povia, and L. Manna, *Colloidal CdSe/Cu3P/CdSe Nanocrystal Heterostructures and Their Evolution upon Thermal Annealing.* Acs Nano, 2013. **7**(5): p. 3997-4005.
167. Ceseracciu, L., K. Miszta, F. De Angelis, S. Marras, M. Prato, R. Brescia, A. Scarpellini, and L. Manna, *Compression stiffness of porous nanostructures from self-assembly of branched nanocrystals.* Nanoscale, 2013. **5**(2): p. 681-686.
168. Bigall, N.C., C. Wilhelm, M.L. Beoutis, M. Garcia-Hernandez, A.A. Khan, C. Giannini, A. Sanchez-Ferrer, R. Mezzenga, M.E. Materia, M.A. Garcia, F. Gazeau, A.M. Bittner, L. Manna, and T. Pellegrino, *Colloidal Ordered Assemblies in a Polymer Shell-A Novel Type of Magnetic Nanobeads for Theranostic Applications.* Chemistry of Materials, 2013. **25**(7): p. 1055-1062.
169. Allione, M., A. Ballester, H.B. Li, A. Comin, J.L. Movilla, J.I. Climente, L. Manna, and I. Moreels, *Two-Photon-Induced Blue Shift of Core and Shell Optical Transitions in Colloidal CdSe/CdS Quasi-Type II Quantum Rods.* Acs Nano, 2013. **7**(3): p. 2443-2452.
170. Zavelani-Rossi, M., R. Krahne, G. Della Valle, S. Longhi, I.R. Franchini, S. Girardo, F. Scotognella, D. Pisignano, L. Manna, G. Lanzani, and F. Tassone, *Self-assembled CdSe/CdS nanorod micro-lasers fabricated from solution by capillary jet deposition.* Laser & Photonics Reviews, 2012. **6**(5): p. 678-683.
171. Scotognella, F., G. Lanzani, L. Manna, F. Tassone, and M. Zavelani-Rossi, *Study of higher-energy core states in CdSe/CdS octapod nanocrystals by ultrafast spectroscopy.* European Physical Journal B, 2012. **85**(4).
172. Qi, W.K., J. de Graaf, F. Qiao, S. Marras, L. Manna, and M. Dijkstra, *Ordered Two-Dimensional Superstructures of Colloidal Octapod-Shaped Nanocrystals on Flat Substrates.* Nano Letters, 2012. **12**(10): p. 5299-5303.
173. Mendelsberg, R.J., G. Garcia, H.B. Li, L. Manna, and D.J. Milliron, *Understanding the Plasmon Resonance in Ensembles of Degenerately Doped Semiconductor Nanocrystals.* Journal of Physical Chemistry C, 2012. **116**(22): p. 12226-12231.
174. Manna, L., *Synthesis and assembly of complex nanocrystal structures.* Abstracts of Papers of the American Chemical Society, 2012. **244**.

175. Maier, S., M. Kall, and L. Manna, *Plasmic sensors.* Annalen Der Physik, 2012. **524**(11): p. A155-A155.
176. Lupo, M.G., F. Scotognella, M. Zavelani-Rossi, G. Lanzani, L. Manna, and F. Tassone, *Band-edge ultrafast pump-probe spectroscopy of core/shell CdSe/CdS rods: assessing electron delocalization by effective mass calculations.* Physical Chemistry Chemical Physics, 2012. **14**(20): p. 7420-7426.
177. Li, H.B., R. Brescia, R. Krahne, G. Bertoni, M.J.P. Alcocer, C. D'Andrea, F. Scotognella, F. Tassone, M. Zanella, M. De Giorgi, and L. Manna, *Blue-UV-Emitting ZnSe(Dot)/ZnS(Rod) Core/Shell Nanocrystals Prepared from CdSe/CdS Nanocrystals by Sequential Cation Exchange.* Acs Nano, 2012. **6**(2): p. 1637-1647.
178. Lavieville, R., Y. Zhang, A. Casu, A. Genovese, L. Manna, E. Di Fabrizio, and R. Krahne, *Charge Transport in Nanoscale "All-Inorganic" Networks of Semiconductor Nanorods Linked by Metal Domains.* Acs Nano, 2012. **6**(4): p. 2940-2947.
179. Kudera, S., Y. Zhang, E. Di Fabrizio, L. Manna, and R. Krahne, *Spatial analysis of the photocurrent generation and transport in semiconductor nanocrystal films.* Physical Review B, 2012. **86**(7).
180. Korobchevskaya, K., C. George, L. Manna, and A. Comin, *Effect of Morphology on Ultrafast Carrier Dynamics in Asymmetric Gold-Iron Oxide Plasmonic Heterodimers.* Journal of Physical Chemistry C, 2012. **116**(51): p. 26924-26928.
181. Kim, M.R., K. Miszta, M. Povia, R. Brescia, S. Christodoulou, M. Prato, S. Marras, and L. Manna, *Influence of Chloride Ions on the Synthesis of Colloidal Branched CdSe/CdS Nanocrystals by Seeded Growth.* Acs Nano, 2012. **6**(12): p. 11088-11096.
182. Head, C.R., E. Kammann, M. Zanella, L. Manna, and P.G. Lagoudakis, *Spinning nanorods - active optical manipulation of semiconductor nanorods using polarised light.* Nanoscale, 2012. **4**(12): p. 3693-3697.
183. Guardia, P., R. Di Corato, L. Lartigue, C. Wilhelm, A. Espinosa, M. Garcia-Hernandez, F. Gazeau, L. Manna, and T. Pellegrino, *Water-Soluble Iron Oxide Nanocubes with High Values of Specific Absorption Rate for Cancer Cell Hyperthermia Treatment.* Acs Nano, 2012. **6**(4): p. 3080-3091.
184. Goris, B., M.A. Van Huis, S. Bals, H.W. Zandbergen, L. Manna, and G. Van Tendeloo, *Thermally Induced Structural and Morphological Changes of CdSe/CdS Octapods.* Small, 2012. **8**(6): p. 937-942.
185. Ferrari, A.C., K.S. Novoselov, M. Chhowalla, L. Manna, and A.L. da Rosa, *Science and technology of nanotubes, nanowires and graphene Preface.* Physica E-Low-Dimensional Systems & Nanostructures, 2012. **44**(6): p. 921-923.
186. Dilena, E., D. Dorfs, C. George, K. Miszta, M. Povia, A. Genovese, A. Casu, M. Prato, and L. Manna, *Colloidal Cu2-x(SySe1-y) alloy nanocrystals with controllable crystal phase: synthesis, plasmonic properties, cation exchange and electrochemical lithiation.* Journal of Materials Chemistry, 2012. **22**(26): p. 13023-13031.
187. De Trizio, L., M. Prato, A. Genovese, A. Casu, M. Povia, R. Simonutti, M.J.P. Alcocer, C. D'Andrea, F. Tassone, and L. Manna, *Strongly Fluorescent Quaternary Cu-In-Zn-S Nanocrystals Prepared from Cu1-xInS2 Nanocrystals by Partial Cation Exchange.* Chemistry of Materials, 2012. **24**(12): p. 2400-2406.
188. De Trizio, L., A. Figuerola, L. Manna, A. Genovese, C. George, R. Brescia, Z. Saghi, R. Simonutti, M. Van Huis, and A. Falqui, *Size-Tunable, Hexagonal Plate-like Cu3P and Janus-like Cu-Cu3P Nanocrystals.* Acs Nano, 2012. **6**(1): p. 32-41.
189. de Graaf, J. and L. Manna, *A Roadmap for the Assembly of Polyhedral Particles.* Science, 2012. **337**(6093): p. 417-418.
190. De Caro, L., D. Altamura, F.A. Vittoria, G. Carbone, F. Qiao, L. Manna, and C. Giannini, *A superbright X-ray laboratory microsource empowered by a novel restoration algorithm.* Journal of Applied Crystallography, 2012. **45**: p. 1228-1235.

191. Dallari, W., M.S. d'Abbusco, M. Zanella, S. Marras, L. Manna, A. Diaspro, and M. Allione, *Light-Induced Inhibition of Photoluminescence Emission of Core/Shell Semiconductor Nanorods and Its Application for Optical Data Storage.* Journal of Physical Chemistry C, 2012. **116**(48): p. 25576-25580.
192. Comin, A., K. Korobchevskaya, C. George, A. Diaspro, and L. Manna, *Plasmon Bleaching Dynamics in Colloidal Gold-Iron Oxide Nanocrystal Heterodimers.* Nano Letters, 2012. **12**(2): p. 921-926.
193. Bertoni, G., V. Grillo, R. Brescia, X.X. Ke, S. Bals, A. Catellani, H.B. Li, and L. Manna, *Direct Determination of Polarity, Faceting, and Core Location in Colloidal Core/Shell Wurtzite Semiconductor Nanocrystals.* Acs Nano, 2012. **6**(7): p. 6453-6461.
194. Zhang, Y., K. Miszta, S. Kudera, L. Manna, E. Di Fabrizio, and R. Krahne, *Spatially resolved photoconductivity of thin films formed by colloidal octapod-shaped CdSe/CdS nanocrystals.* Nanoscale, 2011. **3**(7): p. 2964-2970.
195. Zanella, M., R. Gomes, M. Povia, C. Giannini, Y. Zhang, A. Riskin, M. Van Bael, Z. Hens, and L. Manna, *Self-Assembled Multilayers of Vertically Aligned Semiconductor Nanorods on Device-Scale Areas.* Advanced Materials, 2011. **23**(19): p. 2205-+.
196. Zanella, M., G. Bertoni, I.R. Franchini, R. Brescia, D. Baranov, and L. Manna, *Assembly of shape-controlled nanocrystals by depletion attraction.* Chemical Communications, 2011. **47**(1): p. 203-205.
197. van Huis, M.A., A. Figuerola, C.M. Fang, A. Beche, H.W. Zandbergen, and L. Manna, *Chemical Transformation of Au-Tipped CdS Nanorods into AuS/Cd Core/Shell Particles by Electron Beam Irradiation.* Nano Letters, 2011. **11**(11): p. 4555-4561.
198. Scotognella, F., K. Miszta, D. Dorfs, M. Zavelani-Rossi, R. Brescia, S. Marras, L. Manna, G. Lanzani, and F. Tassone, *Ultrafast Exciton Dynamics in Colloidal CdSe/CdS Octapod Shaped Nanocrystals.* Journal of Physical Chemistry C, 2011. **115**(18): p. 9005-9011.
199. Scotognella, F., G. Della Valle, A.R.S. Kandada, D. Dorfs, M. Zavelani-Rossi, M. Conforti, K. Miszta, A. Comin, K. Korobcheyskaya, G. Lanzani, L. Manna, and F. Tassone, *Plasmon Dynamics in Colloidal Cu2-xSe Nanocrystals.* Nano Letters, 2011. **11**(11): p. 4711-4717.
200. Petti, L., M. Rippa, J. Zhou, L. Manna, M. Zanella, and P. Mormile, *Novel hybrid organic/inorganic 2D quasiperiodic PC: from diffraction pattern to vertical light extraction.* Nanoscale Research Letters, 2011. **6**.
201. Petti, L., M. Rippa, J. Zhou, L. Manna, and P. Mormile, *A novel hybrid organic/inorganic photonic crystal slab showing a resonance action at the band edge.* Nanotechnology, 2011. **22**(28).
202. Paolella, A., C. George, M. Povia, Y. Zhang, R. Krahne, M. Gich, A. Genovese, A. Falqui, M. Longobardi, P. Guardia, T. Pellegrino, and L. Manna, *Charge Transport and Electrochemical Properties of Colloidal Greigite (Fe3S4) Nanoplatelets.* Chemistry of Materials, 2011. **23**(16): p. 3762-3768.
203. Morello, G., A. Fiore, R. Mastria, A. Falqui, A. Genovese, A. Creti, M. Lomascolo, I.R. Franchini, L. Manna, F. Della Sala, R. Cingolani, and M. De Giorgi, *Temperature and Size Dependence of the Optical Properties of Tetrapod-Shaped Colloidal Nanocrystals Exhibiting Type-II Transitions.* Journal of Physical Chemistry C, 2011. **115**(37): p. 18094-18104.
204. Miszta, K., D. Dorfs, A. Genovese, M.R. Kim, and L. Manna, *Cation Exchange Reactions in Colloidal Branched Nanocrystals.* Acs Nano, 2011. **5**(9): p. 7176-7183.
205. Miszta, K., J. de Graaf, G. Bertoni, D. Dorfs, R. Brescia, S. Marras, L. Ceseracciu, R. Cingolani, R. van Roij, M. Dijkstra, and L. Manna, *Hierarchical self-assembly of suspended branched colloidal nanocrystals into superlattice structures.* Nature Materials, 2011. **10**(11): p. 872-876.

206. Li, H.B., M. Zanella, A. Genovese, M. Povia, A. Falqui, C. Giannini, and L. Manna, *Sequential Cation Exchange in Nanocrystals: Preservation of Crystal Phase and Formation of Metastable Phases.* Nano Letters, 2011. **11**(11): p. 4964-4970.
207. Krahne, R., M. Zavelani-Rossi, M.G. Lupo, L. Manna, and G. Lanzani, *Amplified spontaneous emission from core and shell transitions in CdSe/CdS nanorods fabricated by seeded growth.* Applied Physics Letters, 2011. **98**(6).
208. Krahne, R., G. Morello, A. Figuerola, C. George, S. Deka, and L. Manna, *Physical properties of elongated inorganic nanoparticles.* Physics Reports-Review Section of Physics Letters, 2011. **501**(3-5): p. 75-221.
209. Korobchevskaya, K., C. George, A. Diaspro, L. Manna, R. Cingolani, and A. Comin, *Ultrafast carrier dynamics in gold/iron-oxide nanocrystal heterodimers.* Applied Physics Letters, 2011. **99**(1).
210. George, C., A. Genovese, F. Qiao, K. Korobchevskaya, A. Comin, A. Falqui, S. Marras, A. Roig, Y. Zhang, R. Krahne, and L. Manna, *Optical and electrical properties of colloidal (spherical Au)-(spinel ferrite nanorod) heterostructures.* Nanoscale, 2011. **3**(11): p. 4647-4654.
211. George, C., D. Dorfs, G. Bertoni, A. Falqui, A. Genovese, T. Pellegrino, A. Roig, A. Quarta, R. Comparelli, M.L. Curri, R. Cingolani, and L. Manna, *A Cast-Mold Approach to Iron Oxide and Pt/Iron Oxide Nanocontainers and Nanoparticles with a Reactive Concave Surface.* Journal of the American Chemical Society, 2011. **133**(7): p. 2205-2217.
212. Dorfs, D., T. Hartling, K. Miszta, N.C. Bigall, M.R. Kim, A. Genovese, A. Falqui, M. Povia, and L. Manna, *Reversible Tunability of the Near-Infrared Valence Band Plasmon Resonance in Cu2-xSe Nanocrystals.* Journal of the American Chemical Society, 2011. **133**(29): p. 11175-11180.
213. Di Corato, R., N.C. Bigall, A. Ragusa, D. Dorfs, A. Genovese, R. Marotta, L. Manna, and T. Pellegrino, *Multifunctional Nanobeads Based on Quantum Dots and Magnetic Nanoparticles: Synthesis and Cancer Cell Targeting and Sorting.* Acs Nano, 2011. **5**(2): p. 1109-1121.
214. Brescia, R., K. Miszta, D. Dorfs, L. Manna, and G. Bertoni, *Birth and Growth of Octapod-Shaped Colloidal Nanocrystals Studied by Electron Tomography.* Journal of Physical Chemistry C, 2011. **115**(41): p. 20128-20133.
215. Baranov, D., L. Manna, and A.G. Kanaras, *Chemically induced self-assembly of spherical and anisotropic inorganic nanocrystals.* Journal of Materials Chemistry, 2011. **21**(42): p. 16694-16703.
216. Antognazza, M.R., F. Scotognella, K. Miszta, D. Dorfs, M. Zanella, M. Zavelani-Rossi, L. Manna, G. Lanzani, and F. Tassone, *Steady-state photoinduced absorption of CdSe/CdS octapod shaped nanocrystals.* Physical Chemistry Chemical Physics, 2011. **13**(33): p. 15326-15330.
217. Zavelani-Rossi, M., M.G. Lupo, F. Tassone, L. Manna, and G. Lanzani, *Suppression of Biexciton Auger Recombination in CdSe/CdS Dot/Rods: Role of the Electronic Structure in the Carrier Dynamics.* Nano Letters, 2010. **10**(8): p. 3142-3150.
218. Zavelani-Rossi, M., M.G. Lupo, R. Krahne, L. Manna, and G. Lanzani, *Lasing in self-assembled microcavities of CdSe/CdS core/shell colloidal quantum rods.* Nanoscale, 2010. **2**(6): p. 931-935.
219. Pisanello, F., L. Martiradonna, P. Spinicelli, A. Fiore, J.P. Hermier, L. Manna, R. Cingolani, E. Giacobino, M. De Vittorio, and A. Bramati, *Dots in rods as polarized single photon sources.* Superlattices and Microstructures, 2010. **47**(1): p. 165-169.
220. Pisanello, F., L. Martiradonna, G. Lemenager, P. Spinicelli, A. Fiore, L. Manna, J.P. Hermier, R. Cingolani, E. Giacobino, M. De Vittorio, and A. Bramati, *Room temperature-dipolelike single photon source with a colloidal dot-in-rod.* Applied Physics Letters, 2010. **96**(3).
221. Petti, L., M. Rippa, A. Fiore, L. Manna, and P. Mormile, *DYNAMIC ORIENTATIONAL PHOTO-REFRACTIVE GRATINGS OBSERVED IN CdSe/CdS NANORODS DOPED NEMATIC LIQUID CRYSTAL CELLS.* Journal of Nonlinear Optical Physics & Materials, 2010. **19**(1): p. 111-121.

222. Petti, L., M. Rippa, A. Fiore, L. Manna, and P. Mormile, *Dynamic orientational photorefractive gratings observed in CdSe/CdS nanorods imbedded in liquid crystal cells.* Optical Materials, 2010. **32**(9): p. 1060-1065.
223. Petti, L., M. Rippa, A. Fiore, L. Manna, and P. Mormile, *Optically induced light modulation in an hybrid nanocomposite system of inorganic CdSe/CdS nanorods and nematic liquid crystals.* Optical Materials, 2010. **32**(9): p. 1011-1016.
224. Persano, A., M. De Giorgi, A. Fiore, R. Cingolani, L. Manna, A. Cola, and R. Krahne, *Photoconduction Properties in Aligned Assemblies of Colloidal CdSe/CdS Nanorods.* Acs Nano, 2010. **4**(3): p. 1646-1652.
225. Morello, G., F. Della Sala, L. Carbone, L. Manna, R. Cingolani, and M. De Giorgi, *Evidence for an internal field in CdSe/CdS nanorods by time resolved and single rod experiments.* Superlattices and Microstructures, 2010. **47**(1): p. 174-177.
226. Lupo, M.G., M. Zavelani-Rossi, A. Fiore, D. Polli, L. Carbone, R. Cingolani, L. Manna, and G. Lanzani, *Evidence of electron wave function delocalization in CdSe/CdS asymmetric nanocrystals.* Superlattices and Microstructures, 2010. **47**(1): p. 170-173.
227. Franchini, I.R., A. Cola, A. Rizzo, R. Mastria, A. Persano, R. Krahne, A. Genovese, A. Falqui, D. Baranov, G. Gigli, and L. Manna, *Phototransport in networks of tetrapod-shaped colloidal semiconductor nanocrystals.* Nanoscale, 2010. **2**(10): p. 2171-2179.
228. Franchini, I.R., G. Bertoni, A. Falqui, C. Giannini, L.W. Wang, and L. Manna, *Colloidal PbTe-Au nanocrystal heterostructures.* Journal of Materials Chemistry, 2010. **20**(7): p. 1357-1366.
229. Figuerola, A., M. van Huis, M. Zanella, A. Genovese, S. Marras, A. Falqui, H.W. Zandbergen, R. Cingolani, and L. Manna, *Epitaxial CdSe-Au Nanocrystal Heterostructures by Thermal Annealing.* Nano Letters, 2010. **10**(8): p. 3028-3036.
230. Figuerola, A., R. Di Corato, L. Manna, and T. Pellegrino, *From iron oxide nanoparticles towards advanced iron-based inorganic materials designed for biomedical applications.* Pharmacological Research, 2010. **62**(2): p. 126-143.
231. Falqui, A., G. Bertoni, A. Genovese, S. Marras, M. Malerba, I.R. Franchini, and L. Manna, *Electron Microscopy Studies of Electron-Beam Sensitive PbTe-Based Nanostructures.* Microscopy Research and Technique, 2010. **73**(10): p. 944-951.
232. Deka, S.R., A. Quarta, R. Di Corato, A. Falqui, L. Manna, R. Cingolani, and T. Pellegrino, *Acidic pH-Responsive Nanogels as Smart Cargo Systems for the Simultaneous Loading and Release of Short Oligonucleotides and Magnetic Nanoparticles.* Langmuir, 2010. **26**(12): p. 10315-10324.
233. Deka, S., K. Miszta, D. Dorfs, A. Genovese, G. Bertoni, and L. Manna, *Octapod-Shaped Colloidal Nanocrystals of Cadmium Chalcogenides via "One-Pot" Cation Exchange and Seeded Growth.* Nano Letters, 2010. **10**(9): p. 3770-3776.
234. Deka, S., A. Genovese, Y. Zhang, K. Miszta, G. Bertoni, R. Krahne, C. Giannini, and L. Manna, *Phosphine-Free Synthesis of p-Type Copper(I) Selenide Nanocrystals in Hot Coordinating Solvents.* Journal of the American Chemical Society, 2010. **132**(26): p. 8912-+.
235. Bomm, J., A. Buchtemann, A. Fiore, L. Manna, J.H. Nelson, D. Hill, and W. van Sark, *Fabrication and spectroscopic studies on highly luminescent CdSe/CdS nanorod polymer composites.* Beilstein Journal of Nanotechnology, 2010. **1**: p. 94-100.
236. Baranov, D., A. Fiore, M. van Huis, C. Giannini, A. Falqui, U. Lafont, H. Zandbergen, M. Zanella, R. Cingolani, and L. Manna, *Assembly of Colloidal Semiconductor Nanorods in Solution by Depletion Attraction.* Nano Letters, 2010. **10**(2): p. 743-749.
237. Rizzo, A., C. Nobile, M. Mazzeo, M. De Giorgi, A. Fiore, L. Carbone, R. Cingolani, L. Manna, and G. Gigli, *Polarized Light Emitting Diode by Long-Range Nanorod Self-Assembling on a Water Surface.* Acs Nano, 2009. **3**(6): p. 1506-1512.

238. Nolle, D., E. Goering, T. Tietze, G. Schutz, A. Figuerola, and L. Manna, *Structural and magnetic deconvolution of FePt/FeOx-nanoparticles using x-ray magnetic circular dichroism.* New Journal of Physics, 2009. **11**.
239. Nobile, C., L. Carbone, A. Fiore, R. Cingolani, L. Manna, and R. Krahne, *Self-assembly of highly fluorescent semiconductor nanorods into large scale smectic liquid crystal structures by coffee stain evaporation dynamics.* Journal of Physics-Condensed Matter, 2009. **21**(26).
240. Lutich, A., L. Carbone, S. Volchek, V. Yakovtseva, V. Sokol, L. Manna, and S. Gaponenko, *Macroscale alignment of CdSe/CdS nanorods by porous anodic alumina templates.* Physica Status Solidi-Rapid Research Letters, 2009. **3**(5): p. 151-153.
241. Li, Y.Q., R. Mastria, K.C. Li, A. Fiore, Y. Wang, R. Cingolani, L. Manna, and G. Gigli, *Improved photovoltaic performance of bilayer heterojunction photovoltaic cells by triplet materials and tetrapod-shaped colloidal nanocrystals doping.* Applied Physics Letters, 2009. **95**(4).
242. Li, Y.Q., R. Mastria, A. Fiore, C. Nobile, L.X. Yin, M. Biasiucci, G. Cheng, A.M. Cucolo, R. Cingolani, L. Manna, and G. Gigli, *Improved Photovoltaic Performance of Heterostructured Tetrapod-Shaped CdSe/CdTe Nanocrystals Using C60 Interlayer.* Advanced Materials, 2009. **21**(44): p. 4461-+.
243. Fiore, A., R. Mastria, M.G. Lupo, G. Lanzani, C. Giannini, E. Carlino, G. Morello, M. De Giorgi, Y. Li, R. Cingolani, and L. Manna, *Tetrapod-Shaped Colloidal Nanocrystals of II-VI Semiconductors Prepared by Seeded Growth.* Journal of the American Chemical Society, 2009. **131**(6): p. 2274-2282.
244. Figuerola, A., I.R. Franchini, A. Fiore, R. Mastria, A. Falqui, G. Bertoni, S. Bals, G. Van Tendeloo, S. Kudera, R. Cingolani, and L. Manna, *End-to-End Assembly of Shape-Controlled Nanocrystals via a Nanowelding Approach Mediated by Gold Domains.* Advanced Materials, 2009. **21**(5): p. 550-+.
245. Di Corato, R., P. Piacenza, M. Musaro, R. Buonsanti, P.D. Cozzoli, M. Zambianchi, G. Barbarella, R. Cingolani, L. Manna, and T. Pellegrino, *Magnetic-Fluorescent Colloidal Nanobeads: Preparation and Exploitation in Cell Separation Experiments.* Macromolecular Bioscience, 2009. **9**(10): p. 952-958.
246. Deka, S., A. Quarta, M.G. Lupo, A. Falqui, S. Boninelli, C. Giannini, G. Morello, M. De Giorgi, G. Lanzani, C. Spinella, R. Cingolani, T. Pellegrino, and L. Manna, *CdSe/CdS/ZnS Double Shell Nanorods with High Photoluminescence Efficiency and Their Exploitation As Biolabeling Probes.* Journal of the American Chemical Society, 2009. **131**(8): p. 2948-2958.
247. Deka, S., A. Falqui, G. Bertoni, C. Sangregorio, G. Poneti, G. Morello, M. De Giorgi, C. Giannini, R. Cingolani, L. Manna, and P.D. Cozzoli, *Fluorescent Asymmetrically Cobalt-Tipped CdSe@CdS Core@Shell Nanorod Heterostructures Exhibiting Room-Temperature Ferromagnetic Behavior.* Journal of the American Chemical Society, 2009. **131**(35): p. 12817-12828.
248. Chiodo, L., F. Della Sala, T. Pellegrino, R. Cingolani, and L. Manna, *An ab initio study of the magnetic-metallic CoPt3-Au interfaces.* Journal of Physics-Condensed Matter, 2009. **21**(1).
249. Carbone, L., L. Manna, and C. Sonnichsen, *Self-Assembly of Amphiphilic Nanocrystals.* Angewandte Chemie-International Edition, 2009. **48**(24): p. 4282-4283.
250. Zanella, M., A. Falqui, S. Kudera, L. Manna, M.F. Casula, and W.J. Parak, *Growth of colloidal nanoparticles of group II-VI and IV-VI semiconductors on top of magnetic iron-platinum nanocrystals.* Journal of Materials Chemistry, 2008. **18**(36): p. 4311-4317.
251. von Holt, B., S. Kudera, A. Weiss, T.E. Schrader, L. Manna, W.J. Parak, and M. Braun, *Ligand exchange of CdSe nanocrystals probed by optical spectroscopy in the visible and mid-IR.* Journal of Materials Chemistry, 2008. **18**(23): p. 2728-2732.
252. Steiner, D., D. Dorfs, U. Banin, F. Della Sala, L. Manna, and O. Millo, *Determination of band offsets in heterostructured colloidal nanorods using scanning tunneling spectroscopy.* Nano Letters, 2008. **8**(9): p. 2954-2958.

253. Quarta, A., R. Di Corato, L. Manna, S. Argentiere, R. Cingolani, G. Barbarella, and T. Pellegrino, *Multifunctional nanostructures based on inorganic nanoparticles and oligothiophenes and their exploitation for cellular studies.* Journal of the American Chemical Society, 2008. **130**(32): p. 10545-10555.
254. Persano, A., G. Leo, L. Manna, and A. Cola, *Charge carrier transport in thin films of colloidal CdSe quantum rods.* Journal of Applied Physics, 2008. **104**(7).
255. Nobile, C., P.D. Ashby, P.J. Schuck, A. Fiore, R. Mastria, R. Cingolani, L. Manna, and R. Krahne, *Probe Tips Functionalized with Colloidal Nanocrystal Tetrapods for High-Resolution Atomic Force Microscopy Imaging.* Small, 2008. **4**(12): p. 2123-2126.
256. Morello, G., D. Tari, L. Carbone, L. Manna, R. Cingolani, and M. De Giorgi, *Radiative recombination dynamics in tetrapod-shaped CdTe nanocrystals: Evidence for a photoinduced screening of the internal electric field.* Applied Physics Letters, 2008. **92**(19).
257. Morello, G., F. Della Sala, L. Carbone, L. Manna, G. Maruccio, R. Cingolani, and M. De Giorgi, *Intrinsic optical nonlinearity in colloidal seeded grown CdSe/CdS nanostructures: Photoinduced screening of the internal electric field.* Physical Review B, 2008. **78**(19).
258. Morello, G., A. Anni, P.D. Cozzoli, L. Manna, R. Cingolani, and A. De Giorgi, *The influence of intrinsic and surface states on the emission properties of colloidal nanocrystals.* Superlattices and Microstructures, 2008. **43**(5-6): p. 528-531.
259. Martiradonna, L., L. Carbone, A. Tandaechanurat, M. Kitamura, S. Iwamoto, L. Manna, M. De Vittorio, R. Cingolani, and Y. Arakawa, *Two-dimensional photonic crystal resist membrane nanocavity embedding colloidal dot-in-a-rod nanocrystals.* Nano Letters, 2008. **8**(1): p. 260-264.
260. Malvindi, M.A., L. Carbone, A. Quarta, A. Tino, L. Manna, T. Pellegrino, and C. Tortiglione, *Rod-Shaped Nanocrystals Elicit Neuronal Activity In Vivo.* Small, 2008. **4**(10): p. 1747-1755.
261. Lupo, M.G., F. Della Sala, L. Carbone, M. Zavelani-Rossi, A. Fiore, L. Luer, D. Polli, R. Cingolani, L. Manna, and G. Lanzani, *Ultrafast Electron-Hole Dynamics in Core/Shell CdSe/CdS Dot/Rod Nanocrystals.* Nano Letters, 2008. **8**(12): p. 4582-4587.
262. Figuerola, A., A. Fiore, R. Di Corato, A. Falqui, C. Giannini, E. Micotti, A. Lascialfari, M. Corti, R. Cingolani, T. Pellegrino, P.D. Cozzoli, and L. Manna, *One-pot synthesis and characterization of size-controlled bimagnetic FePt-iron oxide heterodimer nanocrystals.* Journal of the American Chemical Society, 2008. **130**(4): p. 1477-1487.
263. Fasoli, A., S. Pisana, A. Colli, L. Carbone, L. Manna, and A.C. Ferrari, *Vapor-phase nucleation of individual CdSe nanostructures from shape-engineered nanocrystal seeds.* Applied Physics Letters, 2008. **92**(2).
264. Di Corato, R., A. Quarta, P. Piacenza, A. Ragusa, A. Figuerola, R. Buonsanti, R. Cingolani, L. Manna, and T. Pellegrino, *Water solubilization of hydrophobic nanocrystals by means of poly(maleic anhydride-alt-1-octadecene).* Journal of Materials Chemistry, 2008. **18**(17): p. 1991-1996.
265. Della Torre, A., P.P. Pompa, L.L. del Mercato, R. Chiuri, R. Krahne, G. Maruccio, L. Carbone, L. Manna, R. Cingolani, R. Rinaldi, S.S. Shankar, and M. Sastry, *Interconnection of specific nano-objects by electron beam lithography - A controllable method.* Materials Science & Engineering C-Biomimetic and Supramolecular Systems, 2008. **28**(2): p. 299-302.
266. Creti, A., M. Lomascolo, G. Leo, L. Manna, and M. Anni, *Shell thickness dependence of exciton trapping in colloidal core/shell nanorods.* Journal of Luminescence, 2008. **128**(3): p. 361-365.
267. Creti, A., G. Leo, A. Persano, A. Cola, L. Manna, and M. Lomascolo, *Role of defect states on electrical and optical properties in CdSe nanorod thin films.* Physica E-Low-Dimensional Systems & Nanostructures, 2008. **40**(6): p. 2063-2065.

268. Creti, A., M. Anni, M. Zavelani-Rossi, G. Lanzani, L. Manna, and M. Lomascolo, *Ultrafast carrier dynamics and confined acoustic phonons in CdSe nanorods.* Journal of Optics a-Pure and Applied Optics, 2008. **10**(6).
269. Corti, M., A. Lascialfari, E. Micotti, A. Castellano, M. Donativi, A. Quarta, P.D. Cozzoli, L. Manna, T. Pellegrino, and C. Sangregorio, *Magnetic properties of novel superparamagnetic MRI contrast agents based on colloidal nanocrystals.* Journal of Magnetism and Magnetic Materials, 2008. **320**(14): p. E320-E323.
270. Caputo, G., C. Nobile, T. Kipp, L. Blasi, V. Grillo, E. Carlino, L. Manna, R. Cingolani, P.D. Cozzoli, and A. Athanassiou, *Reversible wettability changes in colloidal TiO2 nanorod thin-film coatings under selective UV laser irradiation.* Journal of Physical Chemistry C, 2008. **112**(3): p. 701-714.
271. Caputo, G., C. Nobile, R. Buonsanti, T. Kipp, L. Manna, R. Cingolani, P.D. Cozzoli, and A. Athanassiou, *Determination of surface properties of various substrates using TiO2 nanorod coatings with tunable characteristics.* Journal of Materials Science, 2008. **43**(10): p. 3474-3480.
272. Tortiglione, C., A. Quarta, A. Tino, L. Manna, R. Cingolani, and T. Pellegrino, *Synthesis and biological assay of GSH functionalized fluorescent quantum dots for staining Hydra vulgaris.* Bioconjugate Chemistry, 2007. **18**(3): p. 829-835.
273. Rizzo, A., Y.Q. Li, S. Kudera, F. Della Sala, M. Zanella, W.J. Parak, R. Cingolani, L. Manna, and G. Gigli, *Blue light emitting diodes based on fluorescent CdSe/ZnS nanocrystals.* Applied Physics Letters, 2007. **90**(5).
274. Quarta, A., R. Di Corato, L. Manna, A. Ragusa, and T. Pellegrino, *Fluorescent-magnetic hybrid nanostructures: Preparation, properties, and applications in biology.* Ieee Transactions on Nanobioscience, 2007. **6**(4): p. 298-308.
275. Pompa, P.P., L. Martiradonna, A. Della Torre, L. Carbone, L.L. del Mercato, L. Manna, M. De Vittorio, F. Calabi, R. Cingolani, and R. Rinaldi, *Fluorescence enhancement in colloidal semiconductor nanocrystals by metallic nanopatterns.* Sensors and Actuators B-Chemical, 2007. **126**(1): p. 187-192.
276. Nobile, C., S. Kudera, A. Fiore, L. Carbone, G. Chilla, T. Kipp, D. Heitmann, R. Cingolani, L. Manna, and R. Krahne, *Confinement effects on optical phonons in spherical, rod-, and tetrapod-shaped nanocrystals detected by Raman spectroscopy.* Physica Status Solidi a-Applications and Materials Science, 2007. **204**(2): p. 483-486.
277. Nobile, C., V.A. Fonoberov, S. Kudera, A. Della Torre, A. Ruffino, G. Chilla, T. Kipp, D. Heitmann, L. Manna, R. Cingolani, A.A. Balandin, and R. Krahne, *Confined optical phonon modes in aligned nanorod arrays detected by resonant inelastic light scattering.* Nano Letters, 2007. **7**(2): p. 476-479.
278. Morello, G., M. De Giorgi, S. Kudera, L. Manna, R. Cingolani, and M. Anni, *Temperature and size dependence of nonradiative relaxation and exciton-phonon coupling in colloidal CdTe quantum dots.* Journal of Physical Chemistry C, 2007. **111**(16): p. 5846-5849.
279. Morello, G., M. Anni, P.D. Cozzoli, L. Manna, R. Cingolani, and M. De Giorgi, *Picosecond photoluminescence decay time in colloidal nanocrystals: The role of intrinsic and surface states.* Journal of Physical Chemistry C, 2007. **111**(28): p. 10541-10545.
280. Morello, G., M. Anni, P.D. Cozzoli, L. Manna, R. Cingolani, and M. De Giorgi, *The role of intrinsic and surface states on the emission properties of colloidal CdSe and CdSe/ZnS quantum dots.* Nanoscale Research Letters, 2007. **2**(10): p. 512-514.
281. Kudera, S., M. Zanella, C. Giannini, A. Rizzo, Y.Q. Li, G. Gigli, R. Cingolani, G. Ciccarella, W. Spahl, W.J. Parak, and L. Manna, *Sequential growth of magic-size CdSe nanocrystals.* Advanced Materials, 2007. **19**(4): p. 548-+.

282. Kudera, S., L. Carbone, E. Carlino, R. Cingolani, P.D. Cozzoli, and L. Manna, *Synthesis routes for the growth of complex nanostructures.* Physica E-Low-Dimensional Systems & Nanostructures, 2007. **37**(1-2): p. 128-133.
283. Fu, A.H., W.W. Gu, B. Boussert, K. Koski, D. Gerion, L. Manna, M. Le Gros, C.A. Larabell, and A.P. Alivisatos, *Semiconductor quantum rods as single molecule fluorescent biological labels.* Nano Letters, 2007. **7**(1): p. 179-182.
284. Fasoli, A., A. Colli, S. Kudera, L. Manna, S. Hofmann, C. Ducati, J. Robertson, and A.C. Ferrari, *Catalytic and seeded shape-selective synthesis of II-VI semiconductor nanowires.* Physica E-Low-Dimensional Systems & Nanostructures, 2007. **37**(1-2): p. 138-141.
285. Creti, A., M. Anni, M. Zavelani-Rossi, G. Lanzani, L. Manna, and M. Lomascolo, *Role of defect states on Auger processes in resonantly pumped CdSe nanorods.* Applied Physics Letters, 2007. **91**(9).
286. Casavola, M., V. Grillo, E. Carlino, C. Giannini, F. Gozzo, E.F. Pinel, M.A. Garcia, L. Manna, R. Cingolani, and P.D. Cozzoli, *Topologically controlled growth of magnetic-metal-functionalized semiconductor oxide nanorods.* Nano Letters, 2007. **7**(5): p. 1386-1395.
287. Carbone, L., C. Nobile, M. De Giorgi, F.D. Sala, G. Morello, P. Pompa, M. Hytch, E. Snoeck, A. Fiore, I.R. Franchini, M. Nadasan, A.F. Silvestre, L. Chiodo, S. Kudera, R. Cingolani, R. Krahne, and L. Manna, *Synthesis and micrometer-scale assembly of colloidal CdSe/CdS nanorods prepared by a seeded growth approach.* Nano Letters, 2007. **7**(10): p. 2942-2950.
288. Tari, D., M. De Giorgi, P.P. Pompa, L. Carbone, L. Manna, S. Kudera, and R. Cingolani, *Exciton transitions in tetrapod-shaped CdTe nanocrystals investigated by photomodulated transmittance spectroscopy.* Applied Physics Letters, 2006. **89**(9).
289. Pompa, P.P., L. Martiradonna, A. Della Torre, F. Della Sala, L. Manna, M. De Vittorio, F. Calabi, R. Cingolani, and R. Rinaldi, *Metal-enhanced fluorescence of colloidal nanocrystals with nanoscale control.* Nature Nanotechnology, 2006. **1**(2): p. 126-130.
290. Pompa, P.P., R. Chiuri, L. Manna, T. Pellegrino, L.L. del Mercato, W.J. Parak, F. Calabi, R. Cingolani, and R. Rinaldi, *Fluorescence resonance energy transfer induced by conjugation of metalloproteins to nanoparticles.* Chemical Physics Letters, 2006. **417**(4-6): p. 351-357.
291. Pellegrino, T., A. Fiore, E. Carlino, C. Giannini, P.D. Cozzoli, G. Ciccarella, M. Respaud, L. Palmirotta, R. Cingolani, and L. Manna, *Heterodimers based on CoPt3-Au nanocrystals with tunable domain size.* Journal of the American Chemical Society, 2006. **128**(20): p. 6690-6698.
292. Martiradonna, L., L. Carbone, M. De Giorgi, L. Manna, G. Gigli, R. Cingolani, and M. De Vittorio, *High Q-factor colloidal nanocrystal-based vertical microcavity by hot embossing technology.* Applied Physics Letters, 2006. **88**(18).
293. Malkmus, S., S. Kudera, L. Manna, W.J. Parak, and M. Braun, *Electron-hole dynamics in CdTe tetrapods.* Journal of Physical Chemistry B, 2006. **110**(35): p. 17334-17338.
294. Kudera, S., L. Carbone, M. Zanella, R. Cingolani, W.J. Parak, and L. Manna, *Synthesis and perspectives of complex crystalline nano-structures.* Physica Status Solidi a-Applications and Materials Science, 2006. **203**(6): p. 1329-1336.
295. Krahne, R., G. Chilla, C. Schuller, S. Kudera, D. Tari, M. De Giorgi, D. Heitmann, R. Cingolani, and L. Manna, *Shape dependence of the scattering processes of optical phonons in colloidal nanocrystals detected by Raman Spectroscopy.* Journal of Nanoelectronics and Optoelectronics, 2006. **1**(1): p. 104-107.
296. Krahne, R., G. Chilla, C. Schuller, L. Carbone, S. Kudera, G. Mannarini, L. Manna, D. Heitmann, and R. Cingolani, *Confinement effects on optical phonons in polar tetrapod nanocrystals detected by resonant inelastic light scattering.* Nano Letters, 2006. **6**(3): p. 478-482.

297. Creti, A., M. Zavelani-Rossi, G. Lanzani, M. Anni, L. Manna, and M. Lomascolo, *Role of the shell thickness in stimulated emission and photoinduced absorption in CdSe core/shell nanorods.* Physical Review B, 2006. **73**(16).
298. Cozzoli, P.D., E. Snoeck, M.A. Garcia, C. Giannini, A. Guagliardi, A. Cervellino, F. Gozzo, A. Hernando, K. Achterhold, N. Ciobanu, F.G. Parak, R. Cingolani, and L. Manna, *Colloidal synthesis and characterization of tetrapod-shaped magnetic nanocrystals.* Nano Letters, 2006. **6**(9): p. 1966-1972.
299. Cozzoli, P.D., T. Pellegrino, and L. Manna, *Synthesis, properties and perspectives of hybrid nanocrystal structures.* Chemical Society Reviews, 2006. **35**(11): p. 1195-1208.
300. Carbone, L., S. Kudera, C. Giannini, G. Ciccarella, R. Cingolani, P.D. Cozzoli, and L. Manna, *Selective reactions on the tips of colloidal semiconductor nanorods.* Journal of Materials Chemistry, 2006. **16**(40): p. 3952-3956.
301. Carbone, L., S. Kudera, E. Carlino, W.J. Parak, C. Giannini, R. Cingolani, and L. Manna, *Multiple wurtzite twinning in CdTe nanocrystals induced by methylphosphonic acid.* Journal of the American Chemical Society, 2006. **128**(3): p. 748-755.
302. Anni, M., L. Manna, R. Cingolani, D. Valerini, A. Creti, and M. Lomascolo, *Forster energy transfer from blue-emitting polymers to colloidal CdSe/ZnS core shell quantum dots (vol 85, pg 4169, 2004).* Applied Physics Letters, 2006. **88**(25).
303. Zaitseva, N., L. Manna, D. Gerion, and C.K. Saw, *Comment: Precipitation of selenium from CdSe nanocrystal solutions.* Advanced Materials, 2005. **17**(11): p. 1321-1324.
304. Valerini, D., A. Creti, M. Lomascolo, L. Manna, R. Cingolani, and M. Anni, *Temperature dependence of the photoluminescence properties of colloidal CdSe/ZnS core/shell quantum dots embedded in a polystyrene matrix.* Physical Review B, 2005. **71**(23).
305. Tari, D., M. De Giorgi, F. Della Sala, L. Carbone, R. Krahne, L. Manna, R. Cingolani, S. Kudera, and W.J. Parak, *Optical properties of tetrapod-shaped CdTe nanocrystals.* Applied Physics Letters, 2005. **87**(22).
306. Pellegrino, T., S. Kudera, T. Liedl, A.M. Javier, L. Manna, and W.J. Parak, *On the development of colloidal nanoparticles towards multifunctional structures and their possible use for biological applications.* Small, 2005. **1**(1): p. 48-63.
307. Manna, L., L.W. Wang, R. Cingolani, and A.P. Alivisatos, *First-principles modeling of unpassivated and surfactant-passivated bulk facets of wurtzite CdSe: A model system for studying the anisotropic growth of CdSe nanocrystals.* Journal of Physical Chemistry B, 2005. **109**(13): p. 6183-6192.
308. Manna, L., *Synthesis, applications and perspectives of nanocrystal heterostructures.* Abstracts of Papers of the American Chemical Society, 2005. **229**: p. U715-U715.
309. Li, Y.Q., A. Rizzo, M. Mazzeo, L. Carbone, L. Manna, R. Cingolani, and G. Gigli, *White organic light-emitting devices with CdSe/ZnS quantum dots as a red emitter.* Journal of Applied Physics, 2005. **97**(11).
310. Kudera, S., L. Carbone, M.F. Casula, R. Cingolani, A. Falqui, E. Snoeck, W.J. Parak, and L. Manna, *Selective growth of PbSe on one or both tips of colloidal semiconductor nanorods.* Nano Letters, 2005. **5**(3): p. 445-449.
311. De Giorgi, M., D. Tari, L. Manna, R. Krahne, and R. Cingolani, *Optical properties of colloidal nanocrystal spheres and tetrapods.* Microelectronics Journal, 2005. **36**(3-6): p. 552-554.
312. Creti, A., M. Anni, M. Zavelani-Rossi, G. Lanzani, G. Leo, F. Della Sala, L. Manna, and M. Lomascolo, *Ultrafast carrier dynamics in core and core/shell CdSe quantum rods: Role of the surface and interface defects.* Physical Review B, 2005. **72**(12).

313. Cozzoli, P.D., L. Manna, M.L. Curri, S. Kudera, C. Giannini, M. Striccoli, and A. Agostiano, *Shape and phase control of colloidal ZnSe nanocrystals.* Chemistry of Materials, 2005. **17**(6): p. 1296-1306.
314. Cozzoli, P.D. and L. Manna, *Asymmetric nanoparticles - Tips on growing nanocrystals.* Nature Materials, 2005. **4**(11): p. 801-802.
315. Blasi, L., L. Longo, P.P. Pompa, L. Manna, G. Ciccarella, G. Vasapollo, R. Cingolani, R. Rinaldi, A. Rizzello, R. Acierno, C. Storelli, and M. Maffia, *Formation and characterization of glutamate dehydrogenase monolayers on silicon supports.* Biosensors & Bioelectronics, 2005. **21**(1): p. 30-40.
316. Puzder, A., A.J. Williamson, N. Zaitseva, G. Galli, L. Manna, and A.P. Alivisatos, *The effect of organic ligand binding on the growth of CdSe nanoparticles probed by Ab initio calculations.* Nano Letters, 2004. **4**(12): p. 2361-2365.
317. Pellegrino, T., L. Manna, S. Kudera, T. Liedl, D. Koktysh, A.L. Rogach, S. Keller, J. Radler, G. Natile, and W.J. Parak, *Hydrophobic nanocrystals coated with an amphiphilic polymer shell: A general route to water soluble nanocrystals.* Nano Letters, 2004. **4**(4): p. 703-707.
318. Milliron, D.J., S.M. Hughes, Y. Cui, L. Manna, J.B. Li, L.W. Wang, and A.P. Alivisatos, *Colloidal nanocrystal heterostructures with linear and branched topology.* Nature, 2004. **430**(6996): p. 190-195.
319. Epifani, M., C. Giannini, and L. Manna, *A novel synthesis of CdSe nanocrystals.* Materials Letters, 2004. **58**(19): p. 2429-2432.
320. Anni, M., L. Manna, R. Cingolani, D. Valerini, A. Creti, and M. Lomascolo, *Forster energy transfer from blue-emitting polymers to colloidal CdSe/ZnS core shell quantum dots.* Applied Physics Letters, 2004. **85**(18): p. 4169-4171.
321. Scher, E.C., L. Manna, and A.P. Alivisatos, *Shape control and applications of nanocrystals.* Philosophical Transactions of the Royal Society of London Series a-Mathematical Physical and Engineering Sciences, 2003. **361**(1803): p. 241-255.
322. Manna, L., D.J. Milliron, A. Meisel, E.C. Scher, and A.P. Alivisatos, *Controlled growth of tetrapod-branched inorganic nanocrystals.* Nature Materials, 2003. **2**(6): p. 382-385.
323. Lomascolo, M., A. Creti, G. Leo, L. Vasanelli, and L. Manna, *Exciton relaxation processes in colloidal core/shell ZnSe/ZnS nanocrystals.* Applied Physics Letters, 2003. **82**(3): p. 418-420.
324. Epifani, M., G. Leo, M. Lomascolo, L. Vasanelli, and L. Manna, *Sol-gel synthesis of hybrid organic-inorganic monoliths doped with colloidal CdSe/ZnS core-shell nanocrystals.* Journal of Sol-Gel Science and Technology, 2003. **26**(1-3): p. 441-446.
325. Manna, L., E.C. Scher, L.S. Li, and A.P. Alivisatos, *Epitaxial growth and photochemical annealing of graded CdS/ZnS shells on colloidal CdSe nanorods.* Journal of the American Chemical Society, 2002. **124**(24): p. 7136-7145.
326. Manna, L., E.C. Scher, and A.P. Alivisatos, *Shape control of colloidal semiconductor nanocrystals.* Journal of Cluster Science, 2002. **13**(4): p. 521-532.
327. Li, L.S., J. Walda, L. Manna, and A.P. Alivisatos, *Lyotropic liquid crystalline phase of CdSe quantum rod solution.* Abstracts of Papers of the American Chemical Society, 2002. **223**: p. U379-U379.
328. Li, L.S., J. Walda, L. Manna, and A.P. Alivisatos, *Semiconductor nanorod liquid crystals.* Nano Letters, 2002. **2**(6): p. 557-560.
329. Hu, J.T., L.S. Li, W.D. Yang, L. Manna, L.W. Wang, and A.P. Alivisatos, *Linearly polarized emission from colloidal semiconductor quantum rods.* Science, 2001. **292**(5524): p. 2060-2063.
330. Peng, X.G., L. Manna, W.D. Yang, J. Wickham, E. Scher, A. Kadavanich, and A.P. Alivisatos, *Shape control of CdSe nanocrystals.* Nature, 2000. **404**(6773): p. 59-61.

331. Manna, L., E.C. Scher, and A.P. Alivisatos, *Synthesis of soluble and processable rod-, arrow-, teardrop-, and tetrapod-shaped CdSe nanocrystals.* Journal of the American Chemical Society, 2000. **122**(51): p. 12700-12706.
332. Leo, G., M.L. Curri, A. Cola, M. Catalano, M. Lomascolo, L. Manna, F. Quaranta, A. Agostiano, G.M. Farinola, F. Babudri, F. Naso, M. Della Monica, and L. Vasanelli, *Preparation and characterisation of organic-inorganic heterojunction based on BDA-PPV/CdS nanocrystals.* Materials Science and Engineering B-Solid State Materials for Advanced Technology, 2000. **74**(1-3): p. 175-179.
333. Curri, M.L., A. Agostiano, L. Manna, M. Della Monica, M. Catalano, L. Chiavarone, V. Spagnolo, and M. Lugara, *Synthesis and characterization of CdS nanoclusters in a quarternary microemulsion: The role of the cosurfactant.* Journal of Physical Chemistry B, 2000. **104**(35): p. 8391-8397.
334. Agostiano, A., M. Catalano, M.L. Curri, M. Della Monica, L. Manna, and L. Vasanelli, *Synthesis and structural characterisation of CdS nanoparticles prepared in a four-components "water-in-oil" microemulsion.* Micron, 2000. **31**(3): p. 253-258.
335. Giacovazzo, C., L. Manna, D. Siliqi, M. Bolognesi, and M. Rizzi, *The translation problem in molecular replacement techniques. I. About the role of triplet invariants.* Acta Crystallographica Section A, 1998. **54**: p. 617-625.
336. Dobrowolski, J.C., M.H. Jamroz, J.K. Kazimirski, K. Bajdor, M.A. Borowiak, L. Manna, M.L. Miglietta, and M. Aresta, *The M(O-2)X(YH3)(3) dioxygen complexes (M = Rh, Co; X = F, Cl, Br, I; Y = N, P): An ab initio, DFT and semiempirical PM3(tm) study.* Polish Journal of Chemistry, 1998. **72**(10): p. 2205-2217.
337. Giacovazzo, C., L. Manna, and D. Siliqi, *The translation problem in molecular replacement techniques .2. The estimate of quartet invariants.* Acta Crystallographica Section A, 1997. **53**: p. 799-806.