

Curriculum Vitae, Hedi Mattoussi

Work address

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Education

PIERRE & MARIE CURIE UNIVERSITY (PARIS VI), Paris, France

- *Habilitation to Direct Research, Physical Chemistry/Nanomaterials, February 1994*
- *Ph.D. Physical Chemistry, October 1987; Work done at the Collège de France, Condensed Matter Physics Laboratory*
- *M. S. Condensed Matter Physics, June 1984*

FACULTY OF SCIENCES TUNIS, Tunisia

- *B. S. Physics, June 1982; graduated with honors*

Appointments

- 08/2009- present: Professor, Florida State University, Department of Chemistry and Biochemistry, Tallahassee, FL
- 09/1997 – 08/2009: Senior Research Scientist, Naval Research Laboratory, Washington, DC
- 07/1995 – 08/1997: Visiting Scientist, Mass. Inst. of Tech., Center for Material Science, Cambridge, MA
- 10/1994 – 06/1995: Assistant Professor, University of Tunis, Tunisia
- 06/1992 – 09/1994: Assistant Scientist, Department of Physics, University of Florida, Gainesville, FL
- 01/1989 – 06/1992: Postdoctoral Research Associate, Chemistry Department, Carnegie Mellon University, Pittsburgh, PA
- 11/1987 – 12/1988: Postdoctoral Research Associate, Polymer Science Department, University of Massachusetts Amherst, MA
- 1984 – 1987: Research associate, Condensed Matter Physics Laboratory, College de France, Paris, France

Honors and Fellowships

- Fellow of the Royal Society of Chemistry (FRSC, UK), Class of 2015
- Fellow of the American Physical Society, Class of 2014
- Fellow of the American Chemical Society, Class of 2011
- Best Publication Award by an National Research Council (NRC) postdoctoral fellow 2010 (M.H. Stewart under PI supervision)
- 2008 Thomas Edison Sigma Xi Basic Science Award
- 2008 Top Navy Engineer of the Year Award

- Technology Transfer Award, Department of the Navy, 2006
- Gambrinus Guest Professor Fellowship, University of Dortmund, Germany, Summer 2006
- Best Publication Award by an National Research Council (NRC) postdoctoral fellow 2005 (H.T. Uyeda under PI supervision)
- Visiting Professor, Universitat Autònoma de Barcelona, Department of Physics, Spain; Summer 2005
- Navy Special Act Award 01/03
- Best Poster AWARD (Naiqian Zhan, graduate student) 245th ACS National Meeting, New Orleans, LA, Spring 2013
- Ocean Optics Young Investigator Award (Wentao Wang, graduate student), SPIE West 2016 meeting, San Francisco, CA

Service and Synergistic Activities (Partial Listing)

- Associate Editor, Physical Chemistry Chemical Physics (PCCP, RSC journal), 2013-present
- Served on several NIH, NSF and ONR review panels, and reviewed several (mail in) individual proposals
- Advisory Board of Materials Horizon (RSC journal), 2013-present
- Organizer of symposium at the 252nd American Chemical Society National Meeting, Philadelphia, PA, August 21-25, 2016. Symposium title: "Composite Colloids for SERS Biodetection"
- Served on the organizing committee of 4 SPIE symposia, 2001, 2002, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, and 2016
- Organizer of the NanoFlorida 2015 meeting, Tallahassee, FL May 12-15, 2015
- Organizer of a symposium (4 days) at the Materials Research Society (MRS) fall 2011 meeting entitled: "Functional Semiconductor Nanocrystals and Metal-Hybrid Structures"
- Member of the organizing committee; the international conference "Nanoscience with Nanocrystals (NaNaX4)" Munich/Tutzing, Germany, April 11 - 15, 2010
- Organizer of the symposium entitled: "Fluorescent Probes in Biophysics and Chemistry," 239th National Meeting, San Francisco, CA, March 21-25, 2010
- Organizer of a symposium (four days) at the Materials Research Society (MRS) fall 2009 meeting entitled: "Biological Imaging and Sensing Using Nanoparticle Assemblies," ~120 participants
- Organizer of a tutorial at the Materials Research Society Fall 2009 meeting entitled: "Interfacing Inorganic Nanoparticles with Biology: Synthesis, Coupling Chemistry, Sensor Design and Imaging."
- Organizer of a symposium (three days) at the Materials Research Society (MRS) fall 2007 meeting entitled: "Quantum-Dot and Nanoparticle Bioconjugates-Tools for Sensing and Biomedical Imaging," ~110 participants
- Organizer (and speaker) of a tutorial at the Materials Research Society Fall 2007 meeting entitled: "Interfacing Quantum Dots, Metallic and Magnetic Nanoparticles with Biology," together with Jinwoo Cheon (Yonsei Univ., Korea) and Vincent Rotello (U. Mass., Amherst); ~100 attendees
- Organizer of a symposium (four and half days) at the Materials Research Society (MRS) fall 2005 meeting entitled: "Quantum Confined Semiconductor Nanostructures: Fabrication, Physical Properties, and Applications," ~250 participants/attendees
- Organizer of a one-day tutorial at the Materials Research Society (MRS) fall 2005 meeting entitled: "Quantum Confined Semiconductor Nanostructures, Fabrication, Characterization, and Spectroscopic Properties," ~ 80 attendees

- Organizer of a symposium (four and half days) at the Materials Research Society (MRS) fall 2003 meeting entitled: “Quantum Dots, Nanoparticles, and Nanowires;” ~300 participants/attendees.
- Organizer of a tutorial at the Materials Research Society (MRS) fall 2003 meeting entitled: “Luminescent QD-bioconjugates: Novel and Promising Tools for Biological Tagging Applications;” ~90 attendees
- Served on the organizing committee of the OSA National Meetings 2006 and 2008

Professional Affiliations:

American Chemical Society (ACS)
American Physical Society (APS)
The Royal Society of Chemistry (RSC)
Materials Research Society, (MRS)
Society of Photo-Optical Instrumentation Engineers (SPIE)

Teaching:

Courses Taught at the Florida State University, Course No., Course Title - Terms

- CHM 1051- Honors General Chemistry II - Spring 2016
- CHM4410-01 – Physical Chemistry I (*thermodynamics & kinetics*) – Fall 2012, 2013, 2014, 2015
- CHM4410-02 – Physical Chemistry II (*quantum & stat. mechanics*) – Spring 2011, 2012, 2013, 2014
- CHM5580] and [CHM5718]- Nano and Bio Materials – Fall 2010, Fall 2011, Spring 2015, Spring 2017

Graduate Students Supervised as Major Professor at FSU

- Xin Ji, Defended/Graduated in December 2014, Title: “Charge Transfer Interactions in Quantum Dot-Dopamine Conjugates: Effects of Buffer pH, QD Size, and Separation Distance”; now Senior Research Scientist at Ocean NanoTech LLC, San Diego, CA
- Naiqian Zhan, defended/graduated in November 2015; Title “Molecular-Scale Multicoordinating Ligands for Coating Luminescent Quantum Dots and Gold Nanoparticles”; now Research Scientist at Illumina Inc., San Diego, CA
- Wentao Wang, defended/graduated September 2016, Title: “Engineering the Bio-Nano Interface using a Multi-Functional Polymer Coating”; now Research Scientist at Ocean NanoTech LLC, San Diego, CA
- Anshika Kapur (5th year)
- Dinesh Mishra (5th year)
- Cengqi Zhang (4th year)
- Woody Perng (4th year)
- Liang Du (2nd year)
- Zhicheng Jin (2nd year)
- Sisi Wang (1st year)

Undergraduate Research Students Supervised at FSU: >15 (currently two)

Postdoctoral Associates Supervised at FSU, Time Period and Current Position

- Hyon Bin Na, Postdoctoral Associate (December 2009 – March 2012), now Assistant Professor at Myongji University, Department of Chemical Engineering, Seoul, Korea.
- Goutam Palui, Postdoctoral Associate (December 2009 – October 2015), now Postdoctoral Associate at Florida State University.
- Suraj Dixit (Postdoctoral Associate, December 2009 – August 2011), now Postdoctoral Associate at Center for Biomedical Imaging, Medical University of South Carolina, Charleston, SC.
- Fadi Aldeek, Postdoctoral Associate (November 2011 – April 2014), now Senior Scientist at the Florida Department of Agriculture and Consumer Services, Tallahassee, FL.
- M. A. Habeeb Muhammed, Postdoctoral Associate (January 2011 – August 2012), now at Ludwig Maximilian University, Munich, Germany.
- Malak Safi, Postdoctoral Associate (February 2012 – December 2013), now a Postdoctoral Associate at Universite Paris-Sud, Orsay, France.
- Dr. Birong Zeng, Visiting Professor Xiamen University, Xiamen, China (September, 2013 – September, 2014); now professor at Xiamen University.
- Tommaso Avellini, visiting graduate student from Univ. of Bologna, Italy (March 2010 – October 2010), now Postdoctoral Associate at the Istituto Italiano di Tecnologia, Genoa, Italy.
- Laura Trapiella-Alfonso, visiting graduate student from Univ. of Oviedo, Spain (September 2010 – January 2011), now Postdoctoral Associate, Rene Descartes University, Paris, France.
- Jan-Philip Merkl, Fulbright visiting graduate student from Univ. of Hamburg, Germany (September, 2013 – June, 2014), now Research Scientist at BASF Construction Solutions GmbH, Dr.-Albert-Frank-Straße 32, 83308 Trostberg, Germany.
- Caio Guilherme Secco de Souza, visiting graduate student from University of Sao Paulo (June 2014 – December 2014), now Postdoctoral associate at University of Sao Carlos.
- Yuya Sugiyama, Asahi KASEI Corporation, Shizuoka, Japan (August 2016 – present)

Dissertations and Theses (committee member) 2010-present

- Weijia Leng (PI: M. Roper), *ongoing*
- Quingpu Wang (PI: O. Steinbock), *ongoing*
- Alexander Blanchard (PI: O. Steinbock), *ongoing*
- Behtash Ahakeri (PI: J. Schlenoff), *ongoing*
- Jose David Delgado-Salazarriaga (PI: J. Schlenoff), *ongoing*
- Ron Ramsubhag (PI: G. Dudley), *ongoing*
- Christopher Escobar as a *University Representative* (PI: T. Cross), *ongoing*
- Chi-han Huang (PI: W. Yang), *MS, defended September 2016*
- Elias Nakouzi (PI: O. Steinbock), *Ph.D., defended/graduated November 2016*
- Paratchata Batsomboon (PI: G. Dudley), *Ph.D., defended/graduated November 2016*
- Shaoxiong Tian (PI: H. Li), *Ph.D., defended/graduated June 2016*
- Kristopher Kelly (PI: J. Schlenoff), *Ph.D., defended/graduated May 2016*
- Lenzi Williams (PI: K. Knappenberger), *Ph.D., defended/graduated April 2016.*
- Carlos Arias Ramos, (PI: J. Schlenoff), *Ph.D., defended/graduated March 2016*

- Joon-Il Kim as a *University Representative* (PI: X. Peng, Physics Department at FSU), *Ph.D., defended/graduated* March 2016
- Xiaoyan Tan (PI: M. Shatruk), *Ph.D., defended/graduated* February 2016
- Stefan Bresch (PI: I. Alabugin), *Ph.D., defended/graduated* November 2015
- Chongyue Yi (PI: K. Knappenberger), *Ph.D., defended/graduated* April 2015.
- Flynt Goodson (PI: S. Saha), *Ph.D., defended/graduated* June 2014
- Marie Z. Markarian (PI: J. Schlenoff), *Ph.D., defended/graduated* June 2011

External Committee Member

- Elena Muro (U. Pierre and Marie Curie, Paris; PI: B. Dubertret), *Ph.D., defended/graduated* May 2011
- Alexandre Mouquin (Universite de Montreal, Montreal Canada, PIs: F. Winnik and D. Maysinger), *Ph.D., defended/graduated* May 2014. External Committee Member, assembled and summarized an evaluation report for the Ph.D. dissertation
- Chi-Han Huang (Pi Wei Yang), Master degree, defended/graduated September 2016

Publications

Refereed Journals:

1. M. Shi, K.L. de Mesy-Bentley, G. Palui, **H. Mattoussi**, A. Elder, H. Yang, "The roles of surface chemistry, dissolution rate, and delivered dose in the cytotoxicity of copper nanoparticles," *Nanoscale* **2017**, 9, 4739–4750. DOI: 10.1039/C6NR09102D
2. A. Kapur, F. Aldeek, X. Ji, M. Safi, W. Wang,^b A. Del Cid, O. Steinbock and **H. Mattoussi**, "Self-assembled Gold Nanoparticle-Fluorescent Protein Conjugates as Platforms for Sensing Thiol Compounds via Modulation of Energy Transfer Quenching," *Bioconjugate Chem.* **2017**, 28, 678–687. DOI: 10.1021/acs.bioconjchem.7b00006
3. M. Safi, T. Domitrovic, N. Zhan, A. Kapur, F. Aldeek, J.E. Johnson, and **H. Mattoussi**, "Intracellular Delivery of Luminescent Quantum Dots Mediated by a Virus-Derived Lytic Peptide," *Bioconjugate Chem.* **2017**, 28, 64–74. DOI: 10.1021/acs.bioconjchem.6b00609
4. A.B. Schwartz, A. Kapur, W. Wang, Z. Huang, E. Fardone, G. Palui, **H. Mattoussi**, D.A. Fadool, "Margatoxin-bound quantum dots as a novel inhibitor of the voltage-gated ion channel Kv1.3," *J. Neurochemistry* **2017**, 140, 404–420. DOI: 10.1111/jnc.13891
5. J-P. Merkl, C. Schmidtke, F. Aldeek, M. Safi, A. Feld, H. Kloust, **H. Mattoussi**, H. Lange and H. Weller, "Self-Assembly of Fluorescent-Plasmonic Nanohybrids Promoted by Metal-Coordination," *J. Phys. Chem. C* **2016**, 120, 25732–25741. DOI: 10.1021/acs.jpcc.6b05204
6. W. Wang, X. Ji, H. Burns and **H. Mattoussi**, "A Multi-coordinating Polymer Ligand Optimized for the Functionalization of Metallic Nanocrystals and Nanorods," *Faraday Discuss.* **2016**, 191, 481–494. DOI: 10.1039/C6FD00056

7. A. Striolo, J. Kim, L. Liz-Marzan, L. Tadiello, M. Pauly, C. Murphy, A. Roig, D. Gracias, Y. Xia, J. Reguera, A. Mueller, K. Critchley, M. Brust, L. Scarabelli, M. Mayer, M. Thiele, M. Buzza, A. Deak, A.M. Bago Rodriguez, C. Kuttner, H. Wolf, E. Kay, A. Stocco, D. Portehault, **H. Mattoussi**, K. Heatley, E. Kumacheva, G. Gonzalez, C. Hanske, W. Tong, M. Nawaz Tahir, B. Abecassis, S. Granick, E. Duguet and A. Synytska, "Janus and patchy nanoparticles: general discussion," *Faraday Discuss.* **2016**, 191, 117-139. DOI: 10.1039/C6FD90048H
8. A. Castelli, A. Striolo, A. Roig, C. Murphy, J. Reguera, L. Liz-Marzan, A. Mueller, K. Critchley, Y. Zhou, M. Brust, A. Thill, L. Scarabelli, L. Tadiello, T. Konig, B. Reiser, M. Arturo L'opez-Quintela, M. Buzza, A. Deak, C. Kuttner, E. Gonzalez Solveyra, L. Pasquato, D. Portehault, **H. Mattoussi**, E. Kumacheva, K. Heatley, J. Bergueiro, G. Gonzalez, W. Tong, M. Nawaz Tahir, B. Abecassis, O. Rojas-Carrillo, Y. Xia, M. Mayer and D. Pedds "Anisotropic nanoparticles: general discussion," *Faraday Discuss.* **2016**, 191, 229-254. DOI: 10.1039/c6fd90049f
9. A. Striolo, J. Kim, C. Murphy, L. Liz-Marzan, J. Lahann, J. Reguera, Y. Zhou, M. Brust, A. Thill, L. Scarabelli, T. Konig, M. Buzza, C. Kuttner, E. Gonzalez Solveyra, H. Wolf, J. Vermant, M. Pauly, A. Harvie, L. Pasquato, A. Stocco, **H. Mattoussi**, E. Kumacheva, K. Heatley, C. Hanske, R. Faller, D. French, A. Honciuc, B. Binks and F. Sicard, "Particles at interfaces: general discussion," *Faraday Discuss.* **2016**, 191, 407-434. DOI: 10.1039/C6FD90050J
10. A. Striolo, F. Sicard, L. Liz-Marzan, C. Murphy, A. Roig, A. Mueller, J. Reguera, Y. Zhou, M. Brust, L. Scarabelli, L. Tadiello, A. Thill, I. Yarovsky, M. Mayer, M. Arturo L'opez-Quintela, C. Kuttner, E. Gonzalez Solveyra, H. Wolf, E. Kay, L. Pasquato, D. Buceta, D. Portehault, **H. Mattoussi**, G. Gonzalez, R. Faller, D. French, B. Abecassis, M. Stevens, Y. Xia, R. Jones, M. Grzelczak, M. Penna and C. Drummond, "Anisotropic nanoparticles general discussion: Applications," *Faraday Discuss.* **2016**, 191, 565-595. DOI: 10.1039/c6fd90051h
11. W. Wang, A. Kapur, X. Ji, B. Zeng, D. Mishra, and **H. Mattoussi**, "A Multifunctional, Compact and High Affinity Polymer Ligand that Provides Biorthogonal Coating of Quantum Dots," *Bioconjugate Chem.* **2016**, 27, 2024–2036. DOI: 10.1021/acs.bioconjchem.6b00309
12. W. Wang, X. Ji, A. Kapur and **H. Mattoussi**, "Surface-Functionalizing Metal, Metal Oxide and Semiconductor Nanocrystals with a Multi-coordinating Polymer Platform," *MRS Advances* **2016**, available on CJO2016. doi:10.1557/adv.2016.375.
13. D. Mishra, F. Aldeek, G. Palui, B. Zeng, S. Mackowski, and **H. Mattoussi**, "Aqueous Growth of Gold Clusters with Tunable Fluorescence Using Photochemically-Modified Lipoic Acid-Based Ligands," *Langmuir* **2016**, 32, 6445–6458. DOI: 10.1021/acs.langmuir.6b00950
14. N. Zhan, G. Palui, J-P. Merkl and **H. Mattoussi**, "Bio-orthogonal Coupling as a Means of Quantifying the Ligand Density on Hydrophilic Quantum Dots," *J. Am. Chem. Soc.* **2016**, 138, 3190–3201. DOI: 10.1021/jacs.5b13574
15. X. Ji, W. Wang, and **H. Mattoussi**, "Controlling the Spectroscopic Properties of Quantum Dots via Energy Transfer and Charge Transfer Interactions: Concepts and Applications," *Nano Today* **2016**, 11, 98—121. DOI: 10.1016/j.nantod.2015.09.004

16. N. Zhan, G. Palui, A. Kapur, V. Palomo, P.E. Dawson, and **H. Mattoussi**, "Controlling the Architecture, Coordination and Reactivity of Nanoparticle Coating Utilizing an Aminoacid Central Scaffold," *J. Am. Chem. Soc.*, **2015**, 137, 16084–16097. DOI: 10.1021/jacs.5b10359
17. W. Wang, X. Ji, A. Kapur, C. Zhang, and **H. Mattoussi**, "A multifunctional polymer combining the imidazole and zwitterion motifs as a biocompatible compact coating of Quantum Dots," *J. Am. Chem. Soc.* **2015**, 137, 14158–14172. DOI: 10.1021/jacs.5b08915
18. N. Zhan, G. Palui, and **H. Mattoussi**, "Multicoordinating molecular scale ligands based on the zwitterionic hydrophilic motif and lipoic acid anchors provide compact biocompatible quantum dots," *Nature Protocols* **2015**, 10, 859-874. DOI:10.1038/nprot.2015.050
19. W. Wang, A. Kapur, X. Ji, M. Safi, G. Palui, V. Palomo, P.E. Dawson, and **H. Mattoussi**, "Photoligation of an Amphiphilic Polymer with Mixed Coordination Provides Compact and Reactive Quantum Dots," *J. Am. Chem. Soc.* **2015**, 137, 5438–5451. DOI: 10.1021/jacs.5b00671
20. X. Ji, W. Wang and **H. Mattoussi**, "Effects of Separation Distance on the Charge Transfer Interactions in Quantum Dot-Dopamine Assemblies," *Phys. Chem. Chem. Phys. (PCCP)* **2015**, 17, 10108—10117. DOI: 10.1039/c5cp00462d
21. F. Aldeek, D. Hawkins, M. Safi, V. Palomo, G. Palui, P.E. Dawson, I. Alabugin, and **H. Mattoussi**, "UV and Sunlight Driven Photochemical Reduction of Lipoic Acid-Based Ligands to Promote Cap Exchange on Luminescent Quantum Dots," *J. Am. Chem. Soc.* **2015**, 137, 2704–2714. DOI: 10.1021/ja512802x
22. X. Ji, N.S. Makarov, W. Wang, G. Palui, I. Robel, and **H. Mattoussi**, "Tuning the Redox Coupling between Quantum Dots and Dopamine in Hybrid Nanoscale Assemblies," *J. Phys. Chem. C* **2015**, 119, 3388–3399. DOI: 10.1021/jp511178u
23. G. Palui, F. Aldeek, W. Wang, and **H. Mattoussi**, "Strategies for Interfacing Inorganic Nanocrystals with Biological Systems based on Polymer-Coating," *Chem. Soc. Rev.* **2015**, 44, 193 – 227. DOI: 10.1039/C4CS00124A
24. P. Dobson, L.L. Yung, L. Rossi, S. Carreira, P. Ray, C. Amiens, K. Brown, D. Zhou, A. Gavrilidis, N.T.K. Thanh, S. Moise, L. Litti, **H. Mattoussi**, M. Todd, S. Mitchell, S. Borsley, A. Heuer-Jungemann, O. Reiser, E. Tsang, M. Thanou, T. Berkleman, D. Soukup, K. Chester, I. Parkin, Y. Antonio D. Fernandez and B. P. Burke, "Magnetic Nanoparticles: general discussion," *Faraday Discussions* **2014**, 175, 113–135. DOI: 10.1039/C4FD90078B, Discussion
25. P. Dobson, L.L. Yung, L. Rossi, Z. Pikramenou, S. Carreira, P. Ray, C. Amiens, K. Brown, M. Abdollah, D. Zhou, M. Prato, S. Moise, L. Litti, M. Todd, K. G"oeken, S. Borsley, A. Heuer-Jungemann, O. Reiser, P. Harvey, T. Carter, M. Thanou, D. Soukup, A. Lesniak, **H. Mattoussi** and S. Fatimah A. Ghani, "Optical nanoparticles: general discussion," *Faraday Discussions* **2014**, 175, 215–227. DOI: 10.1039/C4FD90079K, Discussion
26. W. Wang, F. Aldeek, X. Ji, B. Zeng, and **H. Mattoussi**, "A Multifunctional Amphiphilic Polymer as a Platform for Surface-Functionalizing Metallic and Other Inorganic Nanostructures," *Faraday Discussions* **2014**, 175, 137–151. DOI: 10.1039/c4fd00154k

27. A.R. Longstreet, M. Jo, R.R. Chandler, K. Hanson, N. Zhan, J. Hrudka, **H. Mattoussi**, M. Shatruk, D.T. McQuade, "Ylidenemalonitrile Enamines as Fluorescent "Turn-On" Indicators for Primary Amines," *J. Am. Chem. Soc.* **2014**, *136*, 15493–15496. dx.doi.org/10.1021/ja509058u
28. W. Wang, X. Ji, H-B. Na, M. Safi, Alexandria Smith, G. Palui, J.M. Perez, and **H. Mattoussi**, "A Multi-Dopamine-Modified Polymer as a Ligand Optimally Suited for Interfacing Magnetic Nanoparticles with Biological Systems," *Langmuir* **2014**, *30*, 6197–6208. DOI: 10.1021/la500974r
29. R. Makki, X. Ji, **H. Mattoussi**, and O. Steinbock, "Self-Organized Tubular Structures as Platforms for Quantum Dots," *J. Am. Chem. Soc.* **2014**, *136*, 6463–6469 (2014). DOI: 10.1021/ja501941d.
30. G. Palui, W. Wang, F. Aldeek, and **H. Mattoussi**, "Nanocrystals Surface Functionalization" in *Encyclopedia of Polymer Science and Technology*, 4th Ed., Vol. 8, pp. 785-810, Wiley, Hoboken (2014). DOI: 10.1002/0471440264.pst608
31. F. Aldeek, M. Safi, N. Zhan G. Palui, and **H. Mattoussi**, "Understanding the Self-Assembly of Proteins onto Gold Nanoparticles and Quantum Dots Driven by Metal-Histidine Coordination," *ACS Nano* **2013**, *7*, 10197–10210 (2013). DOI: 10.1021/nn404479h.
32. N. Zhan, G. Palui, M. Safi, X. Ji, and **H. Mattoussi**, "Multidentate Zwitterionic Ligands Provide Compact and highly biocompatible Quantum Dots," *J. Am. Chem. Soc.* **2013**, *135*, 13786-13795. DOI: 10.1021/ja405010v
33. J.B. Delehanty, C.E. Bradburne, K. Boeneman Gemmill, B.C. Mei, **H. Mattoussi**, K. Susumu, J.B. Blanco-Canosa, P.E. Dawson, and I.L. Medintz, "Cytotoxicity of Quantum Dots Used for *In Vitro* Cellular Labeling: Role of QD Surface Ligand, Delivery Modality, Cell Type and Direct Comparison to Organic Fluorophores," *Bioconjugate Chem.* **2013**, *24*, 1570–1583. DOI: 10.1021/bc4001917
34. F. Aldeek, X. Ji, and **H. Mattoussi**, "Quenching of Quantum Dot Emission by Fluorescent Gold Clusters: What It Does and Does Not Share with the Förster Formalism," *J. Phys. Chem. C* **2013**, *117*, 15429–15437. DOI: 10.1021/jp404952x
35. F. Aldeek, M. A. Habeeb Muhammed, G. Palui, N. Zhan, and **H. Mattoussi** "Growth of Highly Fluorescent PEGylated and Zwitterion Functionalized Gold Nanoclusters," *ACS Nano* **2013**, *7*, 2509–2521. DOI: 10.1021/nn305856t
36. N. Zhan, G. Palui, H. Grise' H. Tang, I. Alabugin, and **H. Mattoussi**, "Combining Ligand Design with Photo-ligation to Provide Compact, Colloidally Stable and Easy to Conjugate Quantum Dots," *ACS Applied Mater. Interfaces* **2013**, *5*, 2861–2869. DOI: 10.1021/am302788q
37. B. Pelaz, S. Jaber, T. Aida, J.M. de la Fuente, J. Feldmann, H. E. Gaub, D. Jimenez de Aberasturi, L. Josephson, C. R. Kagan, N. A. Kotov, L. Liz-Marzán, **H. Mattoussi**, P. Mulvaney, C. B. Murray, A. L. Rogach, P. S. Weiss, I. Willner, V. Wulf, and W. J. Parak, "The State of Nanoparticle-Based Nanoscience and Biotechnology: Progress, Promises, and Challenges," *ACS Nano* **2012**, *6*, 8468–8483. DOI: 10.1021/nn303929a
38. M.A. Habeeb Muhammed, F. Aldeek, G. Palui, L. Trapiella-Alfonso and **H. Mattoussi**, "Design and Synthesis of in-situ Functionalized Silver Nanoparticles and Luminescent Nanoclusters by Direct Reduction and Size Focusing," *ACS Nano* **2012**, *6*, 8950–8961. DOI: 10.1021/nn302954n

39. G. Palui, T. Avellini, N. Zhan, P. Feng, D.L. Gray, I. Alabugin, and **H. Mattoussi**, "Photo-induced Ligand Exchange and Phase Transfer of Luminescent Quantum Dots to Aqueous Media," *J. Am. Chem. Soc.* **2012**, *134*, 16370–16378. doi.org/10.1021/ja306621n
40. X. Ji, G. Palui, T. Avellini, H.-B. Na, C.-Y. Yi, K.L. Knappenberger Jr., and **H. Mattoussi**, "On the pH-Dependent Quenching of Quantum Dot Photoluminescence by Redox Active Dopamine," *J. Am. Chem. Soc.* **2012**, *134*, 6006–6017. DOI: 10.1021/ja300724x
41. G. Palui, H.-B. Na, and **H. Mattoussi**, "Polyethylene Glycol-based Multidentate Oligomers for Biocompatible Semiconductor and Gold Nanocrystals," *Langmuir* **2012**, *28*, 2761–2772. DOI: 10.1021/la203968t
42. **H. Mattoussi**, G. Palui, H.-B. Na, "Luminescent Quantum Dots as Platforms for Probing in Vitro and in Vivo Biological Processes," *Adv. Drug Deliv. Rev.* **2012**, *64*, 138-166. DOI:10.1016/j.addr.2011.09.011
43. H.-B. Na, G. Palui, J.T. Rosenberg, X. Ji, S.C. Grant, and **H. Mattoussi**, "Multidentate Catechol-based Polyethylene Glycol Oligomers Provide Enhanced Stability and Biocompatibility to Iron Oxide Nanoparticles," *ACS Nano* **2012**, *6*, 389–399. DOI: 10.1021/nn203735b
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51. P. Tran, E. Goldman, **H. Mattoussi**, G. Anderson, J. M. Mauro, "Bioconjugates of luminescent CdSe-ZnS quantum dots with an engineered two-domain protein G for use in fluoro-immunoassays," in *Nanoparticles and Nanostructured Surfaces: Novel Reporters with Biological Applications*, Catherine J.

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 54. **H. Mattoussi**, J. Rodriguez-Viejo, K.F. Jensen, M.G. Bawendi, and M.F. Rubner, "Electroluminescence and Cathodoluminescence from Inorganic CdSe Nanocrystals Embedded in Thin Films," in *Organic Light-emitting Materials and Devices II*, Proceedings of SPIE-The International Society for Optical Engineering Vol. 3476, 310-321 (1998).
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 57. J.K. Lee, **H. Mattoussi**, D. Yoo, A. Wu and M. F. Rubner "Thin film light emitting heterostructures: From Conjugated Polymers to Ruthenium Complexes to Inorganic Nanocrystallites," *ACS Polymer Preprints* 38 (1) 351-353 (1997).
 58. **H. Mattoussi**, A.W. Cumming, C.B. Murray, M.G. Bawendi, and R. Ober "Structural Stability of CdSe Nanocrystallite Dispersions," in *Metastable Metal-based Phases and Nanostructures*, Ed. by G. Mazzone, R.S. Averback, R.D. Shull, R. Bormann, and R.F. Ziolo, Materials Research Society Proceed. Vol. 400, 107-112 (1996).
 59. **H. Mattoussi**, S. O'Donohue, and F.E. Karasz, "Static and Hydrodynamic Dimensions of Flexible Polyions in Solutions," in *Complex fluids*, Ed. by D. Weitz, E. Sirota, T. Witten, and J. Israelachvili, Materials Research Society Proceed. Vol. 248, 477-482 (1992).
 60. **H. Mattoussi**, P.G. Kaatz, G.C. Berry, and G.D. Patterson, "Nonlinear Optical Properties of PBT in Nematic Solutions," in *Optical and Electrical Properties of Polymers*, Ed. by J.M. Torkelson and J.A. Emerson, Materials Research Society Proceed. Vol. 214, 11-16 (1991).
 61. **H. Mattoussi**, M. Srinivasarao, P.G. Kaatz, and G.C. Berry, "Birefringence and Order in Liquid Crystal Polymer Solutions," in *Optical and Electrical Properties of Polymers*, Ed. by J.M. Torkelson and J.A. Emerson, Materials Research Society Proceed. Vol. 214, 157-162 (1991).

62. **H. Mattoussi**, and G.C. Berry, "The Third-Order Susceptibility of Nematic Solutions of PBT," *ACS Polymer Preprints* 32 (3), 690-692 (1991).
63. **H. Mattoussi**, K.H. Langley, and F.E. Karasz, "Dynamics of flexible polyions in solution: Ionic strength effects," in *Macromolecular Liquids*, Ed. by C.R. Safinya, S.A. Safran, and P.A. Pincus, Materials Research Society Proceed. Vol. 177, 71-76 (1990).

Conference Abstracts (2000- present)

1. W. Wang, A. Kapur, X. Ji, Xin and **H. Mattoussi**, "Surface Functionalization of Metal and Metal Oxide Nanocrystals with Multifunctional Metal-Coordinating Polymers," 13th International Conference on Materials Chemistry (MC13), Liverpool, UK, July 10-13, 2017.
2. B. Zeng, G. Palui, N. Zhan, W. Wang, C. Zhang, and **H. Mattoussi**, Characterizing the Organic Shell Structure and Composition of Hydrophobic CdSe-ZnS Quantum Dots using NMR Spectroscopy," 8-th conference on Nanoscience with Nanocrystals (NANAX-8), Braga, Portugal, July 3-7, 2017.
3. W. Perng, A. Kapur, G. Palui, **H. Mattoussi**, "Characterizing Protein Corona on Inorganic Nanocrystals," The 93rd ACS Florida Annual Meeting and Exposition (FAME), Innisbrook Resort in Palm Harbor, FL, May 4-6, 2017.
4. D. Mishra, F. Aldeek, G. Palui, and **H. Mattoussi**, "Growth of Fluorescent Noble Metal Nanoclusters Protected with Dithiolate Ligands," The 93rd ACS Florida Annual Meeting and Exposition (FAME), Innisbrook Resort in Palm Harbor, FL, May 4-6, 2017.
5. C. Zhang, G. Palui, N. Zhan, and **H. Mattoussi**, "Surface characterization of Semiconducting Quantum Dots using NMR spectroscopy," The 93rd ACS Florida Annual Meeting and Exposition (FAME), Innisbrook Resort in Palm Harbor, FL, May 4-6, 2017.
6. A. Kapur, S. Medina, W. Wang, G. Palui, X. Ji, J.P. Schneider and **H. Mattoussi**, "An anti-microbial peptide based intracellular delivery of nanocrystals," The 93rd ACS Florida Annual Meeting and Exposition (FAME), Innisbrook Resort in Palm Harbor, FL, May 4-6, 2017.
7. **(Invited)** W. Wang, A. Kapur, and **H. Mattoussi**, "Optimizing the Bio-Nano Interface: from Ligand Design to Imaging and Sensing," 1st International Conference on Nanomaterials and Applications (**nanoMAT2017**), Hammamet, Tunisia, April 29-May 1, 2017.
8. A. B. Schwartz, A. Kapur, Z. Huang, R. Anangi, Z. Deklan, E. Fardone, G. Palui, G.F. King, **H. Mattoussi**, D.A. Faddoul, "Margatoxin-bound quantum dots as a tool for targeted inhibition of the voltage-gated potassium channel Kv1.3 in the olfactory bulb," the Association for Chemosenses Sciences (ACHEMS) 2017 conference, Bonita Springs , FL, April 26 – 29, 2017.
9. **(Invited)** **H. Mattoussi**, "Optimizing QDs and Other Inorganic Probes for Imaging and Sensing," The optical Society of America Biophotonics Congress: Optics in the Life Sciences / Optical Molecular Probes, Imaging and Drug Delivery, San Diego, CA, April 2-5, 2017.

10. **(Invited)** D. Mishra, F. Aldeek, G. Palui, **H. Mattoussi**, "Growth of Highly Fluorescent Gold and Silver Nanoclusters," 253rd American Chemical Society National Meeting, San Francisco, CA, April 2-6, 2017.
11. **(Invited)** W. Wang, A. Kapur, X. Ji, **H. Mattoussi**, "Functionalizing various metallic nanostructures with highly effective multi-coordinating polymers," 253rd American Chemical Society National Meeting, San Francisco, CA, April 2-6, 2017.
12. **(Invited)** N. Zhan, G. Palui, and **H. Mattoussi**, "Bio-orthogonal coupling on PEG-modified quantum dots," Colloidal Nanoparticles for Biomedical Applications XII, 2016 SPIE Photonics West, San Francisco, CA, January 28 - February 2, 2017.
13. A. Kapur, S. Medina, W. Wang, G. Palui, X. Ji, J.P. Schneider and **H. Mattoussi**, "Enhanced cytosolic internalization of nanoparticles mediated by an anti-microbial peptide," Colloidal Nanoparticles for Biomedical Applications XII, 2016 SPIE Photonics West, San Francisco, CA, January 28 - February 2, 2017.
14. **(Invited)** **H. Mattoussi**, "Design of a Multi-coordinating Polymer Optimized for Coating a Variety of Inorganic Nanoparticles and Nanorods" NanoFlorida 2016, Orlando, FL, September 25-26, 2016.
15. **(Invited)** W. Wang, X. Ji, A. Kapur and **H. Mattoussi**, "Surface-Functionalizing and Targeting of Quantum Dots, Gold Nanoparticles and Nanorods," International Conference of Fundamental Processes in Semiconductor Nanocrystals (FQDots16), Berlin, Germany, September 5-6, 2016.
16. **(Invited)** **H. Mattoussi**, A. Kapur, G. Palui, W. Wang, S. Medina, J. Schneider, "Cytosolic internalization of luminescent quantum dots," 252nd American Chemical Society National Meeting, Philadelphia, PA, August 21-25, 2016.
17. W. Wang, X. Ji, A. Kapur, **H. Mattoussi**, "Optimizing the bio-nano interface via a multi-coordinating polymer coating," 252nd American Chemical Society National Meeting, Philadelphia, PA, August 21-25, 2016.
18. N. Zhan, G. Palui, J. Merkl, **H. Mattoussi**, "Bio-orthogonal coupling on hydrophilic quantum dots," 252nd American Chemical Society National Meeting, Philadelphia, PA, August 21-25, 2016.
19. **(Invited)** W. Wang, X. Ji, A. Kapur and **H. Mattoussi**, "Surface-Functionalizing and Targeting Gold Nanocrystals, Nanorods and Nanoshells," Nanoparticles with Morphological and Functional Anisotropy: Faraday Discussion, University of Strathclyde, Glasgow, July 4- 6, 2016.
20. **(Invited)** W. Wang, N. Zhan, X. Ji, G. Palui, A. Kapur and **H. Mattoussi**, "Controlling the Surface Properties of Semiconductor and Gold Nanocrystals," PCNSPA Conference 2016 - Photonic Colloidal Nanostructures: Synthesis, Properties, and Applications, St. Petersburg, Russia, June 27 - July 1, 2016.
21. **(Invited)** W. Wang, A. Kapur, X. Ji, and, **H. Mattoussi**, "Enhancing the Biological Compatibility of Inorganic Nanocrystals using an Amphiphilic Polymer," Emerging Technologies 2016 conference, Montreal, Canada, May 25-27, 2016.

22. **(invited)** A. Kapur, W. Wang, S. Medina, J. Schenider, and **H. Mattoussi**, "Peptide-Mediated Cytosolic Internalization of Luminescent Quantum Dots," 251st American Chemical Society National Meeting, San Diego, CA, March 13-17, 2016.
23. W. Wang, X. Ji, A. Kapur, and **H. Mattoussi**, "Functionalization of Metal, Metal Oxide and Semiconductor Nanocrystals using a Multi-coordinating Polymer," 251st American Chemical Society National Meeting, San Diego, CA, March 13-17, 2016.
24. **(Invited)** D. Mishra, F. Aldeek, G. Palui, **H. Mattoussi**, "Growth of Fluorescence-Tunable Gold Clusters using Photo-chemically Activated Ligands," Colloidal Nanoparticles for Biomedical Applications XI, 2016 SPIE Photonics West, San Francisco, CA, February 13-18 , 2016.
25. W. Wang, A. Kapur, X. Ji, **H. Mattoussi**, "Design of a Multi-coordinating Polymer as a Platform for Functionalizing Metal, Metal Oxide and Semiconductor Nanocrystals," Colloidal Nanoparticles for Biomedical Applications XI, 2016 SPIE Photonics West, San Francisco, CA, February 13-18 , 2016.
26. **(Invited)** D. Mishra, F. Aldeek, G. Palui, and **H. Mattoussi**, "Growth of Fluorescence-Tunable Gold Clusters," Pacifichem 2015, Honolulu, Hawaii, December 16-20, 2105.
27. **(Invited)** W. Wang and **H. Mattoussi** "Multi-coordinating Amphiphilic Polymers as a Platform for Functionalizing Metal, Metal Oxide and Semiconductor Nanocrystals," Pacifichem 2015, Honolulu, Hawaii, December 16-20, 2015.
28. **(invited)** W. Wang, A. Kapur, G. Palui, S. Medina, J.P. Schneider, and **H. Mattoussi**, "A Multi-coordinating Polymer as a Platform for Functionalizing Metal, Metal Oxide and Semiconductor Nanocrystals," 4th Nano Today Conference, Dubai (UAE), December 6-10, 2015.
29. **(invited)** **H. Mattoussi**, "Nanocrystals as Tunable Platforms for Chemical Reactions, Sensing and Imaging," The Global Advanced Materials & Surfaces Forum (GAMS 2015), Dubai (UAE), December 7-9, 2015.
30. W. Wang, A. Kapur, X. Ji and **H. Mattoussi**, "Surface-Functionalizing Metal, Metal Oxide and Semiconductor Nanocrystals with a Multi-coordinating Polymer Platform," Materials Research Society Fall 2015 Meeting, Boston, MA, Nov. 29 – Dec. 4, 2015.
31. A. Kapur, G. Palui, S. Medina, X. ji, J.P. Schneider, and **H. Mattoussi**, "Cytosolic Internalization of Quantum Dots and other Nanoparticles Promoted by Cationic Anti-Microbial Peptide," Materials Research Society Fall 2015 Meeting, Boston, MA, Nov. 29 – Dec. 4, 2015.
32. **(invited)** **H. Mattoussi**, "Fluorescence-Tunable Gold Clusters Capped with Lipoic Acid-Polyethylene Glycol Ligands," META 2015, the 6th International Conference on Metamaterials, Photonic Crystals and Plasmonics, The City College of New York, New York, August 4-7, 2015.
33. **(invited)** N. Zhan, B. Zeng, G. Palui, J-P. Merkl, and **H. Mattoussi**, "Quantifying the Ligand Density on Semiconductor Quantum Dots Using a Combination of Optical and Spectroscopic Tools," ICMAT2015 and IUMRS-ICA2015 (8th International Conference on Materials for Advanced Technologies of the Materials Research Society of Singapore and 16th IU MRS-International Conference in Asia), Singapore, June 28 – July 3, 2015.

34. **(invited)** W. Wang, A. Kapur, X. Ji, G. Palui, and **H. Mattoussi**, "Compact, Highly Stable and Reactive Semiconductor and Metal Oxide Nanocrystal-Conjugates," ICMAT2015 and IUMRS-ICA2015 (8th International Conference on Materials for Advanced Technologies of the Materials Research Society of Singapore and 16th IU MRS-International Conference in Asia), Singapore, June 28 – July 3, 2015.
35. G. Palui, N. Zhan, F. Aldeek, I. Alabugin, and **H. Mattoussi**, "Photoinduced Phase Transfer Provides a Novel Ligand Exchange Technique for Preparing Biocompatible Luminescent Quantum Dots," NanoFlorida 2015, Tallahassee, FL, May 12-15, 2015.
36. N. Zhan, G. Palui, J-P. Merkl and **H. Mattoussi**, "Quantitative Study of the Capping Ligands Density on the Surface of Semiconductor Quantum Dots," NanoFlorida 2015, Tallahassee, FL, May 12-15, 2015.
37. D. Mishra, F. Aldeek, G. Palui, and **H. Mattoussi**, "Aqueous Growth of Fluorescence-Tunable Gold Clusters Capped with Lipoic Acid-Polyethylene Glycol (LA-PEG) Ligands," NanoFlorida 2015, Tallahassee, FL, May 12-15, 2015.
38. W. Wang, A. Kapur, X. Ji, and **H. Mattoussi**, "Amphiphilic Polymers with Mixed Coordination as a Flexible Platform for Functionalizing Metal, Metal Oxide and Semiconductor Nanocrystals," NanoFlorida 2015, Tallahassee, FL, May 12-15, 2015.
39. A. Schwartz, J. Spear, Z. Huang, N. Thiebaud, S. Cho, G. Pauli, S. Stagg, **H. Mattoussi**, and D. Fadool, "Design and Development of Drug-bound Nanoparticles Targeting the Olfactory Bulb to Regulate Metabolism," Annual Meeting of the Association for Chemoreception Sciences, April 24th, 2015, Bonita Springs, FL
40. **(Invited)** **H. Mattoussi**, "Redox Coupling between Quantum Dots and the Neurotransmitter Dopamine in Hybrid Assemblies," 20 Years of Quantum Dots at Los Alamos, Santa Fe, NM, April 12-116, 2015.
41. **(Invited)** W. Wang, A. Kapur, X. Ji, G. Palui, and **H. Mattoussi**, "Multi-coordinating Amphiphilic Polymers Provide Compact, Highly Stable and Reactive Semiconductor and Metal Oxide Nanocrystal-Conjugates," 249th American Chemical Society National Meeting, Denver, CO, March 22-26, 2015.
42. **(Invited)** D. Mishra, F. Aldeek, G. Palui, and **H. Mattoussi**, "Aqueous Growth of Fluorescence-Tunable Gold Nanoclusters Capped with Lipoic Acid-Polyethylene Glycol Ligands," 249th American Chemical Society National Meeting, Denver, CO, March 22-26, 2015.
43. **(Invited)** X. Ji, N.S. Makarov, W. Wang, G. Palui, I. Robel, **H. Mattoussi**, "Understanding the redox coupling between quantum dots and the neurotransmitter dopamine in hybrid self-assemblies," Colloidal Nanoparticles for Biomedical Applications X, 2015 SPIE Photonics West, San Francisco, CA, February 7-12 , 2015.
44. N Zhan, G Palui, J-P Merkl, and **H. Mattoussi**, "Quantifying the density of surface capping ligands on semiconductor quantum dots," Colloidal Nanoparticles for Biomedical Applications X, 2015 SPIE Photonics West, San Francisco, CA, February 7-12 , 2015.

45. W. Wang, X. Ji, A. Kapur, G. Palui, **H. Mattoussi**, "Combining Multi-coordinating Amphiphilic Polymer Design with a Mild Photoligation Strategy Provides Compact, Highly Stable and Reactive Quantum Dots," Materials Research Society Fall 2014 Meeting, Boston, MA, Nov. 30 – Dec. 5, 2014.
46. X. Ji, W. Wang, N.S. Makarov, G. Palui, **H. Mattoussi**, "Characterizing the Redox Coupling between Luminescent Quantum Dots and the Neurotransmitter Dopamine in Hybrid Assemblies," Materials Research Society Fall 2014 Meeting, Boston, MA, Nov. 30 – Dec. 5, 2014.
47. N. Zhan, G. Palui, J-P Merkl, **H. Mattoussi**, "Combining surface ligand design with hydrazone ligation to quantify the density of surface capping molecules for semiconductor quantum dots," NanoFlorida 2014, Miami, FL, Sept 25-26, 2014.
48. **(Invited)** W. Wang, F. Aldeek, X. Ji, G. Palui, and **H. Mattoussi**, "A Multifunctional Amphiphilic Polymer as a Platform for Interfacing Metal and Metal Oxide Nanocrystals with Biological Systems," Faraday Discussion 175, Physical Chemistry of Functionalized Biomedical Nanoparticles, University of Bristol, UK, September 17-19, 2014
49. **(Invited)** **H. Mattoussi**, "Peptide-mediated intracellular delivery of inorganic nanocrystals: potential platforms for cancer therapy," TechConnect World 2014 Conference and Expo, National Harbor, MD, June 16-18, 2014.
50. M. Safi, N. Zhan, F. Aldeek, T. Domitrovic, J.J. Johnson, and **H. Mattoussi**, "Peptide-mediated Intracellular Delivery of Luminescent Quantum Dots: Bypassing the Endocytotic Pathways," E-MRS (European Materials Research Society) 2014 Spring Meeting, Lille, France, May 26-30, 2014.
51. **(Invited)** M. Safi, T. Domitrovic, N. Zhan, F. Aldeek, J.E. Johnson, and **H. Mattoussi**, "Non Endocytotic Intracellular Delivery of Luminescent Quantum Dots Mediated by a Lytic Peptide," 247th American Chemical Society National Meeting, Dallas TX, March 16-20, 2014.
52. W. Wang, X. Ji, G. Palui, F. Aldeek and **H. Mattoussi**, "Design of a Multidentate Oligomeric Platform for Biocompatible Magnetic, Metallic and Semiconductor Nanocrystals," 247th American Chemical Society National Meeting, Dallas TX, March 16-20, 2014.
53. X. Ji, W. Wang, and **H. Mattoussi**, "Tuning the Redox Coupling in Quantum Dot-Dopamine Assemblies," 247th American Chemical Society National Meeting, Dallas TX, March 16-20, 2014.
54. **(Invited)** **H. Mattoussi**, "Combining Ligand Design and Metal-Coordination for Optimal Interfacing of Inorganic Nanoprobes with Biological Receptors and Live Cells," Colloquium of the Priority Programme of Deutsche Forschungsgemeinschaft (SPP 1313) on "Bio-Nano-Responses", Fulda, Germany, March, 3 – 5, 2014.

55. **(Invited)** N. Zhan, G. Palui, M. Safi, and **H. Mattoussi**, "Combining ligand design and photo-ligation to provide optimal quantum dot-bioconjugates for sensing and imaging," Colloidal Nanoparticles for Biomedical Applications IX, 2014 SPIE Photonics West, San Francisco, CA, February 1-6 , 2014.
56. W. Wang, G. Palui, X. Ji, F. H. Aldeek, **H. Mattoussi**, "Multidentate oligomeric ligands to enhance the biocompatibility of iron oxide and semiconductor nanoparticles," Colloidal Nanoparticles for Biomedical Applications IX, 2014 SPIE Photonics West, San Francisco, CA, February 1-6 , 2014.
57. D. Buczynska, L. Bujak, F. H. Aldeek, **H. Mattoussi**, S. Mackowski, "Characterization of single gold nanoclusters," Colloidal Nanoparticles for Biomedical Applications IX, 2014 SPIE Photonics West, San Francisco, CA, February 1-6, 2014.
58. Jan-Philip Merkl, N. Zhan, J. Ostermann, G. Palui, C. Schmidtke, H. Kloust, H. Weller, **H. Mattoussi**, "Tuning nanoparticle membranes: new ways for bioconjugation, shielding, and ligand counting," Colloidal Nanoparticles for Biomedical Applications IX, 2014 SPIE Photonics West, San Francisco, CA, February 1-6, 2014.
59. **(Invited)** N. Zhan, G. Palui, I. Alabugin, and **H. Mattoussi**, "Combining Ligand Design with Photo-ligation to Provide Reactive and Biocompatible Quantum Dots," Symposium on Nanomaterials Design, synthesis, applications, biological and environmental impacts, Cancun, Mexico, November 13-17, 2013.
60. M. Safi, N. Zhan, T. Domitrovic, J.J. Johnson, and **H. Mattoussi**, "Peptide-mediated Intracellular Delivery of Luminescent Quantum Dots: Bypassing the Endocytotic Pathways," 246th ACS National Meeting, Indianapolis, Indiana, September 8-12, 2013.
61. **(Invited)** **H. Mattoussi**, "Nanocrystals and Clusters as Functional Platforms for Chemical Reactions and Biological Imaging," "A Random Walk through Polymer Science", Scientific Symposium Honoring, Professor Frank E. Karasz, University of Massachusetts Amherst, MA, June 27-28, 2013
62. **(Invited)** **H. Mattoussi**, "Inorganic Nanocrystals and Clusters as Functional Platforms for Chemical Reactions and Biological Imaging," Indo-US Symposium on Molecular Materials, Indian Institute of Science, Bangalore, July 15-17, 2013.
63. N. Zhan, G. Palui, and **H. Mattoussi**, "Combining Ligand Design with Photo-ligation to Provide Biocompatible Quantum Dots," E-MRS (European Materials Research Society) 2013 Spring Meeting, Strasbourg, France, May 27-31, 2013.
64. F. Aldeek, G. Palui, N. Zhan, and **H. Mattoussi**, "Growth of Highly Fluorescent PEGylated and Zwitterion Functionalized Gold Nanoclusters," E-MRS (European Materials Research Society) 2013 Spring Meeting, Strasbourg, France, May 27-31, 2013.
65. **(Invited)** **H. Mattoussi**, "Biocompatible nanocrystals and clusters as tunable platforms for sensing and imaging," 2013 Plant Biology Mini Symposium, Iowa State University, Ames, IA, April 12, 2013.
66. **(Invited)** **H. Mattoussi**, "Inorganic Nanocrystals as Flexible Platforms for Chemical Reactions, Sensing and Imaging," 245th ACS National Meeting, New Orleans, LA, April 7-11, 2013.

67. N. Zhan, G. Palui, and **H. Mattoussi**, "Combining Ligand Design and Photo-ligation to Transfer Hydrophobic Quantum Dots to Hydrophilic Media," 245th ACS National Meeting, New Orleans, LA, April 7-11, 2013.
68. F. Aldeek, M. A. Habeeb Muhammed, G. Palui, Na. Zhan, and **H. Mattoussi**, "One Phase Growth of Highly Fluorescent PEGylated and Zwitterion Functionalized Gold Nanoclusters," 245th ACS National Meeting, New Orleans, LA, April 7-11, 2013.
69. W. Wang, H-B. Na, G. Palui, F. Aldeek and **H. Mattoussi**, "Design of Multidentate Oligomeric Ligands to Enhance the Biocompatibility of Iron Oxide Nanoparticles," 245th ACS National Meeting, New Orleans, LA, April 7-11, 2013.
70. N. Zhan, G. Palui, and **H. Mattoussi** "Photo-ligation of Luminescent Quantum Dots and their Phase Transfer to Polar and Hydrophilic Media," 22nd Inter American Photochemical Society (I-APS) Winter Conference, Sarasota, FL, January 2-5, 2013.
71. **(Invited) H. Mattoussi**, F. Aldeek, M.A. Habeeb Muhammed, G. Palui, N. Zhan, "One phase Growth and in-situ Functionalization of Fluorescent clusters Using Molecular Scale Multicoordinating Ligands," Southwest Regional Meeting 2012, Baton Rouge Nov. 4-7, 2012.
72. **(Invited) H. Mattoussi**, "Controlling the Photoemission of Quantum Dots by Metal and Redox Active Complexes," *Nanochemistry/nanotechnology*, theme of the Xth European Chemical Societies (EuCheMS) Congress, Prague, Czech Republic, Aug. 26-30, 2012.
73. H-B. Na, G. Palui, N. Zhan, and **H. Mattoussi**, "Design of Multidentate Oligomeric Ligands to Enhance the Biocompatibility of Quantum Dots, Iron Oxide and Gold Nanoparticles," 244th ACS National Meeting, Philadelphia, PA, August 19-24, 2012.
74. M.A. Habeeb Muhammed, F. Aldeeka, G. Palui, L. Trapiella-Alfonsob and **H. Mattoussi**, "Synthesis and in-situ functionalized silver/gold nanoparticles and luminescent nanoclusters by direct reduction and size focusing," 244th ACS National Meeting, Philadelphia, PA, August 19-24, 2012.
75. **(Invited) H. Mattoussi**, "Controlling the Photoemission of Semiconductor Quantum Dot by Metal Clusters and Redox Complexes, *Ordered and Non-Ordered Superstructures of Nanosized Objects: Preparation, Properties, Applications, and Modeling*, International Workshop, Dresden, Germany, July 9-13, 2012.
76. **(Invited) H. Mattoussi**, "Nanocrystals as tunable platforms for chemical reactions and biological imaging," 36th Annual Meeting of the American Society of Photobiology, Montreal, Canada, June 23-27, 2012.
77. **(Invited) H. Mattoussi**, "Functional nanocrystals as tunable platforms for imaging and sensing," Nanotech Conference & Expo, 2012 (Nanotech 2012), Santa Clara, CA, June 18-21, 2012.

78. X. Ji, G. Palui, K.L. Knappenberger Jr., and **H. Mattoussi**, "On the pH-Dependent Quenching of Quantum Dot Photoluminescence by Redox Active Dopamine" QD-2012 Meeting, Santa Fe, NM, May 13-18, 2012.
79. **(Invited) H. Mattoussi** "Functional nanocrystals as tunable platforms for chemical reactions, sensing and imaging," Nanoscience with Nanocrystals, NaNax5, Malaga, Spain, May 7-11, 2012.
80. X. Ji, G. Palui, K.L. Knappenberger Jr., and H. Mattoussi, "On the pH-Dependent Quenching of Quantum Dot Photoluminescence by Redox Active Dopamine," Nanoscience with Nanocrystals, NaNax5, Malaga, Spain, May 7-11, 2012.
81. X. Ji, G. Palui, K.L. Knappenberger Jr., and **H. Mattoussi**, "Quantum Dot-Redox Active Dopamine Assemblies: pH-Dependent Fluorescent Platforms," Nano-Bio Collaborative International Conference 2012 (NBCIC 2012), Tampa, FL, March 22-24, 2012.
82. F. Aldeek, G. Palui, N. Zhang, and **H. Mattoussi**, "Growth and Functionalization of Fluorescent Gold Nanoclusters Using Compact Multi-coordinating Ligands," Nano-Bio Collaborative International Conference 2012 (NBCIC 2012), Tampa, FL, March 22-24, 2012.
83. **(Invited) G. Palui, H-B. Na, and H. Mattoussi**, "Multifunctional Oligomers for Enhancing the Biocompatibility of Semiconductor, Gold and Magnetic Nanocrystals," Materials Research Society Fall Meeting, Boston, MA, Nov. 28 - Dec.2, 2011.
84. X. Ji, G. Palui, H-B. Na and **H. Mattoussi**, "Understanding Charge Transfer Interactions in Quantum Dot-Dopamine Redox Complexes," Materials Research Society Fall Meeting, Boston, MA, Nov. 28 - Dec.2, 2011.
85. H-B. Na, G. Palui, X. Ji, and **H. Mattoussi**, "Multidentate Catechol-derivatized Oligomers as Biocompatible Surface Cap for Iron Oxide Nanoparticles," Materials Research Society Fall Meeting, Boston, MA, Nov. 28 - Dec.2, 2011.
86. G. Palui, H-B. Na, and **H. Mattoussi**, "Polyethylene Glycol-based Multidentate and Multifunctional Oligomers for Enhancing the Biocompatibility of Semiconductor, Gold and Magnetic Nanocrystals," 12th Conference on Methods and Applications of Fluorescence Spectroscopy, Imaging and Probes, - Strasbourg France, September 11-14, 2011.
87. **(Invited) H. Mattoussi**, "Inorganic nanocrystals as tunable platforms for imaging and sensing," Nano-Biology - Summer School 2011, DFG-Center for Functional Nanostructures, Bad Herrenalb Germany, Sept. 7-11, 2011
88. **(Invited) H. Mattoussi**, "Colloidal Inorganic Nanocrystals As Flexible Platforms For Imaging And Sensing," International Symposium on Integrated Functionalities ISIF 2011, Cambridge, England, Jul. 31 – Aug. 4, 2011.
89. G. Palui, H-B. Na, and **H. Mattoussi**, "Polyethylene Glycol-based Multifunctional Oligomers for Enhancing the Biocompatibility of Semiconductor, Gold and Magnetic Nanocrystals," 85th Colloid and Surface Science Symposium, Montreal Canada, June 19-22, 2011.

90. **(Invited)** G. Palui, H-B. Na, and **H. Mattoussi**, "Polyethylene Glycol-based Multidentate and Multifunctional Oligomers for Enhancing the Biocompatibility of Semiconductor, Gold and Magnetic Nanocrystals," E- Materials Research Society, Nice, France, May 9-13, 2011.
91. **(Invited)** **H. Mattoussi**, "Interfacing inorganic nanocrystals with biology: from synthesis to sensing and imaging," 3rd Rise & Symposium: "Advances in Nanomedicine: Current Status and Clinical Application" San Juan, Puerto Rico, April 30, 2011.
92. G. Palui, H-B. Na, X. Ji and **H. Mattoussi**, "Design of polyethylene glycol-based multidentate and multifunctional oligomers to enhance the stability of Semiconductor and metallic nanocrystals," Materials Research Society Spring Meeting, San Francisco, CA, April 25 - 29, 2011.
93. E. Oh, K. Susumu, **H. Mattoussi** and A. Huston, "Use of Disulfide-PEG ligands to Synthesize 1 - 130 nm Gold Nanoparticles with High Stability in Aqueous Phase," Materials Research Society Fall Meeting 2010, Boston, MA, Nov. 29 - Dec. 3, 2010.
94. E. Oh, J.B. Delehanty, K. Susumu, K.E. Sapsford, **H. Mattoussi**, I.L. Medintz, "Effects of size and surface-conjugated peptides on intracellular uptake of gold nanoparticles," Materials Research Society Fall Meeting 2010, Boston, MA, Nov. 29 - Dec. 3, 2010.
95. **(Keynote Speaker)** **H. Mattoussi**, "Interfacing inorganic nano-crystals with biological media: from synthesis to imaging," NanoFlorida 2010 Third Annual NanoScience Technology Symposium at UCF, Orlando, FL, Sept. 24, 2010.
96. **(Invited)** E. Oh, K. Susumu, **H. Mattoussi**, "Design of modular multifunctional ligands and their use for nanoparticle synthesis and coupling to biomolecules," Particles 2010 Conference, Orlando, FL, May 22-25, 2010.
97. **(Invited)** E. Oh, K. Susumu, **H. Mattoussi**, "Molecular scale multifunctional ligands for biological coupling and inorganic nanoparticle synthesis," NaNaX4 Nanoscience with Nanocrystals, Munich / Tutzing, Germany, April 11 - 15, 2010.
98. E. Oh, K. Susumu, J. Delehanty, **H. Mattoussi** and I.L. Medintz; "Controlled Cell Delivery of Gold Nanoparticles by Particle Size and Surface Properties," Materials Research Society Spring Meeting, San Francisco, CA, April 5 - 9, 2010.
99. J.B. Delehanty, C.E. Bradburne, K.E. Boeneman, I.L. Medintz, D. Farrell, T. Pons, B.C. Mei, J. Blanco-Canosa, P.E. Dawson, and **H. Mattoussi**, "Delivery of quantum dot bioconjugates to the cellular cytosol: release from the endolysosomal system," SPIE Photonics West, San Francisco, CA, Jan. 23 - 28, 2010.
100. D. Geissler, H.-G. Loehmannsroeben, L. J. Charbonniere, R. F. Ziesel, N. G. Butlin, I. L. Medintz, **H. Mattoussi**, and N. Hildebrandt, "Optical size determination of quantum dots using FRET with terbium complexes as donors." SPIE Photonics West, San Francisco, CA, Jan. 23 - 28, 2010.

101. J.B. Delehanty, C. Bradburne, K.E. Boeneman, K. Susumu, B.C. Mei, J. B. Blanco-Canosa, P.E. Dawson, H. Mattoussi, A. Huston, and I.L. Medintz, "Quantum dots in life sciences: applications, benefits, and safety issues," SPIE Photonics West, San Francisco, CA, Jan. 23 – 28, 2010.
102. **(Invited)** E. Oh, K. Susumu, **H. Mattoussi**, "One Phase Synthesis of Water-soluble Gold Nanoparticles with Control over Size and Surface Functionalities," Inter-American Photochemical Society 20th Winter Conference, St. Petersburg Beach, FL, January 2-5, 2010.
103. **(Invited)** **H. Mattoussi**, M.H. Stewart, I.L. Medintz, K. Susumu, "Nanoparticle-Bioconjugates: Characterization and use for Sensing and Imaging," Materials Research Society Fall Meeting 2009, Boston, MA, Dec 1- 4, 2009.
104. **(Invited)** E. Oh, K. Susumu, **H. Mattoussi**, "One Phase Synthesis of Water-soluble Gold Nanoparticles with Control over Size and Surface Functionalities," Materials Research Society Fall Meeting 2009, Boston, MA, Dec. 1- 4, 2009.
105. E. Oh, K. Susumu, I. Medintz, **H. Mattoussi**, "Design of maleimide-functionalized Au nanoparticles and their use for surface ligand counting and controlled conjugation to biomolecules," Materials Research Society Fall Meeting 2009, Boston, MA, Dec 1- 4, 2009.
106. K. Boeneman, James Delehanty, J.B. Blanco-Canosa, P.E. Dawson, **H. Mattoussi**, and I. Medintz, "Mediating Cellular Uptake and Endosomal Escape of Quantum Dots," Materials Research Society Fall Meeting 2009, Boston, MA, Dec 1- 4, 2009.
107. **(Invited)** **Hedi Mattoussi**, "Design of Nanoparticle Bioconjugates and their Use for Sensing and Imaging," 3rd Annual Symposium on Integrating Nanotechnology with Cell Biology and Neuroscience, University of New Mexico, Albuquerque, NM, August 17-18, 2009.
108. D.E. Prasuhn, J. Blanco-Canosa, K. Susumu, G.J. Vora, J.B. Delehanty and **H. Mattoussi**, P.E. Dawson, I.L. Medintz, "Multivalent display of biomolecules on semiconductor quantum dots utilizing an aniline-mediated chemoselective ligation," 238th ACS National Meeting, Washington, DC, August 16-20, (2009).
109. E. Oh, K. Susumu, I.L. Medintz, and **H. Mattoussi**, "Stable maleimide-functionalized AuNPs via strong anchoring PEGylated ligands and their coupling to specific peptides," 238th ACS National Meeting, Washington, DC, August 16-20, (2009).
110. K. Susumu, B.C. Mei, E. Oh, M.H. Stewart, I.L. Medintz, and **H. Mattoussi**, "Modular poly(ethylene glycol) ligands for biocompatible semiconductor and gold nanoparticles," 238th ACS National Meeting, Washington, DC, August 16-20, (2009).
111. E. Oh, K. Susumu, and **H. Mattoussi**, "One phase synthesis of gold nanoparticles with control over size and surface functions," 238th ACS National Meeting, Washington, DC, United States, August 16-20, (2009).
112. **(Invited)** M.H. Stewart, K. Susumu, D. Farrell, and **H. Mattoussi**, "Multichelating poly(ethylene glycol)-based ligands for enhanced colloidal stability of inorganic nanocrystals in extreme buffer conditions," 238th ACS National Meeting, Washington, DC, August 16-20, (2009).

- 113.K. Boeneman, J.B. Delehanty, J.R. Deschamps, I.L. Medintz, and **H. Mattoussi**, "Peptide linkers for the assembly of semiconductor quantum dot bioconjugates," 238th ACS National Meeting, Washington, DC, August 16-20, (2009).
- 114.J.B Delehanty, C.E. Bradburne, I.L. Medintz, D. Farrell, T. Pons, J.R. Deschamps, F.M. Brunel, P.E. Dawson, and **H. Mattoussi**, "Intracellular delivery of and sensing with quantum dot nanoassemblies," 238th ACS National Meeting, Washington, DC, United States, August 16-20, (2009).
- 115.**(Invited) Hedi Mattoussi**, "Interfacing Semiconductor and Metallic Nanocrystals with Biology," 1st Nano Today Conference 2009, Singapore August 2-5, 2009.
- 116.**(Invited) Mattoussi**, "Nanoparticle-Bioconjugates: Design, Characterization, and Applications in Sensing and Imaging," Tunisian Days on Nanosciences and Nanotechnologies (TDNST), Tunis, Tunisia, July 11 -13, 2009.
- 117.**(Invited) H. Mattoussi**, "Quantum Dot-Bioconjugates: Applications in Sensing and in Vivo Imaging, Mini symposium No. 46 in the series Frontiers in Medicine, High-Resolution in Vivo Imaging of Cell Biology, Nobel Forum, Karolinska Institute, Stockholm, Sweden, May 15-16, 2009.
- 118.**(Invited) H. Mattoussi**, "Nanoparticle-Bioconjugates: Design, Characterization, and Applications in Sensing and imaging," OPTDIAG2009 conference, Ecole de Physique et Chimie de Paris, Paris, France, May 13-15, 2009.
119. **(Invited) H. Mattoussi**, "Interfacing Quantum Dots with Biology: Use for live cell imagine and Sensor Development," Trac 32 workshop: Nanotechnology in Medicine Workshop, NIH Bethesda, March 11 - 13, 2009.
- 120.K. Boeneman, B.C. Mei, J.R. Deschamps, J.B. Delehanty, **H. Mattoussi**, and I.L. Medintz, "Peptide linkers for the assembly of semiconductor quantum dot bioconjugates," SPIE Photonics West, San Jose, CA, Jan. 24 - 29, (2009).
- 121.D.E. Prasuhn, J.B. Blanco-Canosa, G.J. Vora, H. M. Mattoussi, P.E. Dawson, and I.L. Medintz , "Multivalent display of DNA conjugates on semiconductor quantum dots utilizing a novel conjugation method," SPIE Photonics West, San Jose, CA, Jan. 24 - 29, (2009).
- 122.I.L. Medintz, T. Pons, S.A. Trammell, J.B. Blanco-Canosa, P.E. Dawson, and H. Mattoussi, "Using metal complex-labeled peptides for charge transfer-based biosensing with semiconductor quantum dots," SPIE Photonics West, San Jose, CA, Jan. 24 - 29, (2009).
- 123.J.B. Delehanty, C.E. Bradburne, I.L. Medintz, D. Farrell, T. Pons, J.R. Deschamps, F.M. Brunel, P.E. Dawson, and H. Mattoussi, "Intracellular delivery of and sensing with quantum dot bioconjugates," SPIE Photonics West, San Jose, CA, Jan. 24 - 29, (2009).
- 124.K.E. Sapsford, S. Sun, J. Francis, Y. Kostov, A. Rasooly, D. Farrell, H. Mattoussi, and I.L. Medintz, "Energy transfer-based biosensing of protease activity measured using an electroluminescent platform," SPIE Photonics West, San Jose, CA, Jan. 24 - 29, (2009).

125. M. H. Stewart, I. L. Medintz, S. A. Trammell, J. S. Melinger, H. Mattoussi, "Quantum dot-dopamine conjugates: assembly, characterization of and potential use for sensing," SPIE Photonics West, San Jose, CA, Jan. 24 - 29, (2009).
126. E. Oh, K. Susumu, H. Mattoussi, "Noble Synthesis of AuNPs with 1.7 to 12nm range in Aqueous Phase using Thioctic Acid appended Poly(ethylene glycol)," SPIE Photonics West, San Jose, CA, Jan. 24 - 29, (2009).
127. **(Invited)** Medintz, I.L., Pons, T. and **H. Mattoussi**, "Quantum dots and energy transfer: New applications for biosensing. Colloidal Nanoparticles – From Synthesis to Biological Applications," Phillips University Marburg, Marburg Germany, Sept. 15-17, 2008.
128. **(Invited)** K. Susumu, B.C. Mei, T. Pons, I.L. Medintz, and **H. Mattoussi**, "Hydrophilic quantum dots: design, characterization, coupling to proteins and use for sensor design," Nano-objects in living cells: from physics to physiology, Villeneuve d'Ascq (France), Sept. 1 – 4, 2008.
129. **(Invited)** **H. Mattoussi**, T. Pons, K. Sapsford, I.L. Medintz, S.A. Trammell, "Self-assembled Quantum Dot-Bioconjugates: characterization and coupling to redox metal complexes," SPIE Optics and Photonics 2008, San Diego, CA, Aug. 10 - 14, 2008.
130. **(Invited)** **H. Mattoussi**, "Interfacing Quantum Dots with Biology: General and Unique Properties of Luminescent Quantum Dots" Trac 32 workshop: Nanotechnology in Medicine Workshop, NIH Bethesda, July 29, 2008.
131. **(Invited)** **H. Mattoussi**, "Interfacing Quantum Dots with Biology: Use for live cell imaging and Sensor Development," Trac 32 workshop: Nanotechnology in Medicine Workshop, NIH Bethesda, July 29, 2008.
132. **(Invited)** Delehanty, J.B., Bradburne, C.E., Medintz, I.L., Farrell, D., Pons, T., Brunel, F.M., Dawson, P.E., and **Mattoussi, H.** (2008) Specific cellular delivery of quantum dot-based sensing bio-conjugates. Gordon Conference on Bioanalytical Sensors, Smithfield, RI, June 29 - July 4, 2008.
133. **(Invited)** **H. Mattoussi**, "Semiconductor Quantum Dots: Synthesis, Characterization and Surface Functionalization Strategies," Summer School Nanosciences in Ile de France, Domaine du Tremblay, June 22-27, 2008.
134. **(Invited)** **H. Mattoussi**, "Coupling of Quantum Dots to Biomolecular Receptors: Nanoscale Tools for biology," Summer School Nanosciences in Ile de France, Domaine du Tremblay, June 22-27, 2008.
135. **(Invited)** **H. Mattoussi**, QD-protein/peptide Conjugates: Characterization and Use in Sensor Design and Cellular Imaging," Particles 2008 conference, Orlando, FL, May 10-13, 2008.
136. **(Invited)** K. Susumu, T. Pons, I.L. Medintz, and **H. Mattoussi**, "Self-assembled Quantum Dot-Bioconjugates: Characterization and Coupling to Metal Nanoparticles and Redox Complexes," Workshop on Interactions in Hybrid Nanosystems, Lake Chiemsee, Germany, May, 1 - 4, 2008.
137. **(Invited)** Medintz, I.L., Dawson, P., and **H. Mattoussi**, "Biosensors based on quantum dots and resonance energy transfer," Europtrode IX Ninth European Conference on Optical Chemical Sensors and Biosensors, Crowne Plaza Conference Centre, Dublin, Ireland. March 30 – April 2, 2008.

138. B.C. Mei, K. Susumu, I.L. Medintz, and **H. Mattoussi**, "Biocompatible and functional quantum dots via heterogeneous compact ligands," Materials Research Society Spring Meeting 2008, San Francisco, CA, March 24 - 28, 2008.
139. **(Invited)** I.L. Medintz and **H. Mattoussi**, "Sensing with Semiconductor Quantum Dot Conjugates," SPIE Defense and Security Symposium, Orlando, FL, March 16-20, 2008.
140. I.L. Medintz, T. Pons, P.E. Dawson, and **H. Mattoussi**, "Energy transfer-based biosensing with semiconductor quantum dots: beyond organic dye acceptors," SPIE Photonics West, San Jose, CA, Jan. 19-24, 2008.
141. K. Susumu, B.C. Mei, I.L. Medintz, and **H. Mattoussi**, "Design of compact multifunctional ligands to promote biocompatibility of luminescent QDs," SPIE Photonics West, San Jose, CA, Jan. 19-24, 2008.
142. J.B. Delehanty, C.E. Bradburne, I.L. Medintz, D. Farrell, T. Pons, F.M. Brunel, P.E. Dawson, **H. Mattoussi**, "Specific Cellular Delivery and Intracellular Fate of Quantum Dot-Peptide and Quantum Dot-Polymer Nanoassemblies," SPIE Photonics West, San Jose, CA, Jan. 19-24, 2008.
143. **H. Mattoussi**, *Tutorial entitled: "Interfacing Luminescent Quantum Dots with Biology,"* Materials Research Society Fall Meeting 2007, Boston, MA, Nov. 26 - 30, 2007.
144. I.L. Medintz, T. Pons, S.A. Trammell, F.M. Brunel, P.E. Dawson and **H. Mattoussi**, "Redox Control of Quantum Dot-Bioconjugate Photoluminescence," Materials Research Society Fall Meeting 2007, Boston, MA, Nov. 26 - 30, 2007.
145. **(Invited)** **H. Mattoussi**, K.E. Sapsford, T. Pons, I.L. Medintz, "Self-Assembled Quantum Dot-Bioconjugates: Characterization and Use for Sensing and Probing Cellular Processes," Materials Research Society Fall Meeting 2007, Boston, MA, Nov. 26 - 30, 2007.
146. K.E. Sapsford, T. Pons, I.L. Medintz, S. Higashiya, F. M. Brunel, P. E. Dawson, and **H. Mattoussi**, "Kinetics of Metal-Affinity Driven Self-Assembly between Proteins/Peptides and CdSe-ZnS Quantum Dots," Materials Research Society Fall Meeting 2007, Boston, MA, Nov. 26 - 30, 2007.
147. Kimihiro Susumu, Igor L. Medintz, Thomas Pons, and **H. Mattoussi**, "Biocompatible Quantum Dots Capped With Compact Multifunctional Ligands," Materials Research Society Fall Meeting 2007, Boston, MA, Nov. 26 - 30, 2007.
148. **(Invited)** **H. Mattoussi**, "QD-bioreceptor conjugates: assembly, characterization and use in sensor development and cell imaging", NSF-sponsored workshop on Physical Organic Chemistry, Lake Champlain, VT, Sept. 16-20, 2007.
149. **(Invited)** **H. Mattoussi**, Thomas Pons, Igor L. Medintz, Nadia Anikeeva, and Yuri Sykulev,, "Use of Luminescent Quantum Dot-Bioconjugates as Tools for Sensing and Probing Inter Cellular Interactions," 7th World Congress on Nanocomposites 2007, Las Vegas, NV, Sept. 5-7, 2007.

- 150.K. Susumu, I.L. Medintz, and **H. Mattoussi**, "Design of multifunctional surface ligands to enhance the biological activity of quantum dots," 234th ACS National Meeting, Boston, MA, United States, August 19-23, 2007.
- 151.J.B. Delehanty, D. Farrell, I.L. Medintz, and **H. Mattoussi**, "Specific cellular delivery of quantum dot-peptide and quantum dot-polymer nanoassemblies," 234th ACS National Meeting, Boston, MA, United States, August 19-23, 2007.
- 152.I.L. Medintz and **H. Mattoussi**, "Fluorescence Resonance Energy Transfer-Based Biosensing with Semiconductor Quantum Dots," Nanoelectronic Devices for Defense & Security (NDDS) Conference Crystal City, VA, June 18-21, 2007.
- 153.J. Bautista, F. Brunel, K. Susumu, J.B. Delehanty, I.L. Medintz, **H. Mattoussi**, and P.E. Dawson, "Approaches for the controlled assembly of peptide-QD conjugates," 4th Annual Conference on Foundations of Nanoscience: Self-Assembled Architectures and Devices (Fnano07), Snowbird, Utah, April 18-21, 2007.
- 154.**(Invited) H. Mattoussi**, T. Pons, I.L. Medintz, N. Anikeeva, and Y. Sykulev, "Quantum Dot-Bioconjugates: Tools for Sensing and Probing Cellular Processes," Materials Research Society Spring Meeting 2007, San Francisco, CA, April 9- 13, 2007.
- 155.K. Susumu, Thomas Pons, I.L. Medintz, and **H. Mattoussi**, "Enhancing the Biological Stability and Functionalities of Quantum Dots Via Compact Multifunctional Surface Ligands," Materials Research Society Spring Meeting 2007, San Francisco, CA, April 9- 13, 2007.
- 156.T. Pons, I.L. Medintz, X. Wang, D.S. English and **H. Mattoussi**, "Solution-Phase Single Quantum Dot Fluorescence Resonant Energy Transfer: Probing Nanoparticle-Conjugate Heterogeneity," Materials Research Society Spring Meeting 2007, San Francisco, CA, April 9- 13, 2007.
- 157.**(Invited) H. Mattoussi**, "Self-assembled Quantum Dot-Bioconjugates as Tools for Sensing and Probing Cellular Processes," DOE Genomics: GTL, Systems Biology for Energy and environment, Bethesda, MD, Feb. 11-14, 2007
158. **(Invited) H. Mattoussi**, A.R. Clapp E.R. Goldman, N. Anikeeva, T. Lebedeva and Y. Sykulev, M.L. Dustin, "Probing T cell Response Using Quantum dot-peptide-MHC biosensors," SPIE Photonics West, San Jose, CA, January 20-25, 2007.
- 159.J.B. Delehanty, I.L. Medintz, T. Pons, F.M. Brunel, P.E. Dawson, and **H. Mattoussi**, Selective Cellular Delivery of Self-Assembled Quantum Dot-Peptide Bioconjugates, SPIE Photonics West, San Jose, CA, January 20-25, 2007.
- 160.**(Invited) I.L. Medintz**, P.E. Dawson, A.R. Clapp and **H. Mattoussi**, "Quantum Dot Bioconjugates for Fluorescence Resonance Energy Transfer-Based Biosensing," SPIE Photonics West, San Jose, CA, January 20-25, 2007.
- 161.**(Invited) T. Pons**, I.L. Medintz, X. Wang, D.S. English, **H. Mattoussi**, "Solution-Phase Single Quantum Dot Fluorescence Resonant Energy Transfer: Probing Heterogeneity in Macroscopic Samples," SPIE Photonics West, San Jose, CA, January 20-25, 2007.

162. **(Invited) H. Mattoussi**, "Quantum dot-bioreceptor conjugates as substrates for sensing small and large molecule targets," Gordon Research Conference on Chemical & Biological Terrorism Defense, Ventura, CA January 14-19, 2007.
163. K. Rege, S.J. Patel, Z.E. Megeed, K.N. Nikitzuk, T. Pons, **H. Mattoussi** and M.L. Yarmush, "Immunoconjugates and Quantum Dot-Peptide Assemblies for the Detection and Ablation of Advanced Prostate Cancer Cells," AICHE Annual Meeting, San Francisco, CA, November 12-17, 2006.
164. A.R. Clapp, T. Pons, I.L. Medintz, J.B. Delehanty and **H. Mattoussi**, "Two-Photon Excitation of Quantum Dot Donors in Fluorescence Resonance Energy Transfer Applications," AICHE Annual Meeting, San Francisco, CA, November 12-17, 2006.
165. T. Pons, I.L. Medintz, J.B. Delehanty, and **H. Mattoussi**, "Quantum Dot-Bioconjugates: New Tools for Sensing and Probing Cellular Processes," Workshop on Bioimaging and Engineered Biosystems, Lehigh University, Bethlehem, PA Sept 28-29, 2006.
166. **(Invited)** I.L. Medintz, A.R. Clapp, P.E. Dawson, and **H. Mattoussi**, "Monitoring Protease Kinetics with Quantum Dot Bioconjugates," The Federation of Analytical Chemistry and Spectroscopy Societies (FACSS-2006), Lake Buena Vista, FL, Sept 24-28, 2006.
167. **(Invited)** A.R. Clapp, T. Pons, I.L. Medintz, J.S. Melinger, and **H. Mattoussi**, "Two-Photon Excitation of Quantum Dots in Non-Radiative Energy Transfer," American Chemical Society (ACS) National Meeting, San Francisco, CA, Sept 10-14, 2006.
168. **(Invited)** T. Pons, I.L. Medintz, X. Wang, D. English, **H. Mattoussi**, "Solution-phase Single Molecule Quantum Dot Fluorescence Resonant Energy Transfer," American Chemical Society (ACS) National Meeting. San Francisco, CA Sept 10-14, 2006.
169. **(Invited)** **H. Mattoussi**, "Use of Quantum Dot-bioconjugates for Sensing and Probing Cellular Processes," American Academy of Nanomedicine (AANM) Second Annual Meeting, Washington, DC, Sept. 9-10, 2006.
170. **(Invited)** **H. Mattoussi**, "Design of QD-bioconjugates for sensing and live cell imaging," 38th Middle Atlantic ACS Regional Meeting, Hershey, PA, June 4-7, 2006.
171. **(Invited)** **H. Mattoussi**, "Use of self-assembled QD-peptide conjugates to detect enzymatic activity," Particles2006 conference, Orlando, FL, May 13-16, 2006.
172. I.L. Medintz, E.R. Goldman, T. Pons, A.R. Clapp P.E. Dawson and **H. Mattoussi** "Fluorescence Resonance Energy Transfer-Based Quantum Dot- Bioconjugates for Monitory Proteolytic Enzymatic Activity," Materials Research Society Spring Meeting 2006, San Francisco, CA, April 17- 21, 2006.
173. T. Pons, J.B. Delehanty, I.L. Medintz, F.M. Brunel, P.E. Dawson, and **H. Mattoussi**, "Quantum dot-peptide assemblies for selective intracellular delivery and labeling," Materials Research Society Spring Meeting 2006, San Francisco, CA, April 17- 21, 2006.

174. **(Invited)** A.R. Clapp, T. Pons, **H. Mattoussi**, I.L. Medintz, J.S. Melinger, "Two-Photon Excitation of Quantum Dot Based Nonradiative Energy Transfer," The Biomedical Optics Topical Meeting, Optical Society of America, Fort Lauderdale, FL, March 19 - 23, 2006.
175. **(Invited)** **H. Mattoussi**, A.R. Clapp, I.L. Medintz, "Design of Quantum Dot-Protein Bioconjugates for Use in Immuno- and FRET-Based Assays," Japan Society for the Promotion of Science (JSPS) and University of North Texas Joint Symposium on Nanoscale Materials for Optoelectronics and Biotechnology, Denton, Texas, February 2-3, 2006.
176. **(Invited)** N. Anikeeva, A.R. Clapp, E.R. Goldman, Y. Sykulev, and **H. Mattoussi**, "Probing Antigen Recognition By T Cells Using Self-Assembled Quantum Dot Bioconjugates," SPIE Photonics West, San Jose, CA, January 21-26, 2006.
177. T. Pons, I.L. Medintz, H.T. Uyeda, **H. Mattoussi**, "Probing the effects of spectral overlap on QD-based FRET: ensemble and single molecule studies," SPIE Photonics West, San Jose, CA, January 21-26, 2006.
178. A.R. Clapp, I.L. Medintz, and **H. Mattoussi**, "Quantum dot-based FRET multiplexing: applications for biosensing," SPIE Photonics West, San Jose, CA, January 21-26, 2006.
179. I.L. Medintz, E.R. Goldman, P.E. Dawson, A.R. Clapp and **H. Mattoussi**, "Fluorescence Resonance Energy Transfer Based QD-Bioconjugate Sensors for Detecting Enzymatic Proteolytic Activity," SPIE Photonics West, San Jose, CA, January 21-26, 2006.
180. A.R. Clapp, I.L. Medintz, and **H. Mattoussi**, "Quantum Dots as Energy Acceptors: Studies and Implications Using Long Lifetime Metal-Chelate Donor Fluorophores," Materials Research Society Fall Meeting 2005, Boston, MA, Nov 28 – Dec 2, 2005.
181. I.L. Medintz, E.R. Goldman¹, H.T. Uyeda, A.R. Clapp and **H. Mattoussi**, "Development of FRET-Based QD-Bioconjugate Sensors for Detecting Enzymatic Activity," Materials Research Society Fall Meeting 2005, Boston, MA, Nov 28 – Dec 2, 2005.
182. T. Pons, H.T. Uyeda, and **H. Mattoussi**, "Hydrodynamic dimensions of hydrophilic functional QDs," Materials Research Society Fall Meeting 2005, Boston, MA, Nov 28 – Dec 2, 2005.
183. N. Anikeeva, A.R. Clapp, E.R. Goldman, Y. Sykulev, and **H. Mattoussi**, "Quantum dot-peptide-MHC conjugates as a tool to study mechanisms of antigen recognition by T cells," Materials Research Society Fall Meeting 2005, Boston, MA, Nov 28 – Dec 2, 2005.
184. **(Invited)** **H. Mattoussi**, "Use of quantum dots to design biological assay based on resonance energy transfer," Excited State Processes in Electronic and Bio Nano Materials Conference, Santa Fe, NM, August 8-11, 2005.
185. **(Invited)** **H. Mattoussi**, "Design of QD-bioreceptor conjugates for bio-inspired applications," Yonsei University, Seoul, South Korea, June 16, 2005.
186. **(Invited)** A.R. Clapp, I.L. Medintz, E.R. Goldman, H.T. Uyeda and **H. Mattoussi**, "Assemblies of QD-bioreceptor conjugates and their use in assay design and live cell imaging," 79th ACS Colloid and Surface

Science Symposium, ACS Division of Colloid and Surface Chemistry, Clarkson University, Potsdam, NY, June 12-15, 2005.

187. H.T. Uyeda, K.M. Hanif, A.R. Clapp, and H. Mattoussi, "Design of Multidentate Surface Ligands for Biocompatible Quantum Dots," 79th ACS Colloid and Surface Science Symposium, ACS Division of Colloid and Surface Chemistry, Clarkson University, Potsdam, NY, June 12-15, 2005.
188. H.T. Uyeda, I.L. Medintz, and **H. Mattoussi**, "Synthesis of Multi-dentate Ligands to Prepare Hydrophilic Quantum Dots and their Use in Sensing and Cellular Imaging Investigations," Materials Research Society Spring Meeting, San Francisco, CA, March 28 – April 1, 2005.
189. **(Invited)** I.L. Medintz, A.R. Clapp, E.R. Goldman, H.T. Uyeda and **H. Mattoussi**, "FRET-based Quantum Dot Protein-Bioconjugate Nanosensors," SPIE Photonics West, San Jose, CA, January 22-27, 2005.
190. **(Invited)** J.K. Jaiswal, E.B. Voura, **H. Mattoussi** and S.M. Simon, "Use of quantum dots as fluorescent tags for studying live cells," SPIE Photonics West, San Jose, CA, January 22-27, 2005.
191. A.R. Clapp, I.L. Medintz, B.R. Fisher, and **H. Mattoussi**, "Can Luminescent Quantum Dots be Efficient Energy Acceptors with Organic Dye Donors?," SPIE Photonics West, San Jose, CA, January 22-27, 2005.
192. **(Invited)** A.R. Clapp, I.L. Medintz, H.T. Uyeda, E.R. Goldman, and **H. Mattoussi**, "QD-based Multiplexed Fluorescence Resonance Energy Transfer," SPIE Photonics West, San Jose, CA, January 22-27, 2005.
193. H.T. Uyeda, I.L. Medintz, and **H. Mattoussi**, "Design and Synthesis of Surface Ligands for Quantum Dots for use in Biological Applications," SPIE Photonics West, San Jose, CA, January 22-27, 2005.
194. E.R. Goldman, I.L. Medintz, and **H. Mattoussi**, "A Quantum Dot Based TNT Nanosensor," Materials Research Society Fall Meeting 2004, Boston, MA, Nov. 29 – Dec. 3, 2004.
195. I.L. Medintz, A.R. Clapp, and **H. Mattoussi**, "Quantum Dot Based Fluorescence Resonance Energy Transfer Nanosensors," Materials Research Society Fall Meeting 2003, Boston, MA, Nov. 29 – Dec. 3, 2004.
196. A.R. Clapp, I.L. Medintz, H.T. Uyeda, E.R. Goldman, and **H. Mattoussi**, "Signal Multiplexing in QD-based Fluorescence Resonance Energy Transfer," Materials Research Society Fall Meeting 2004, Boston, MA, Nov. 29 – Dec. 3, 2004.
197. **(Invited)** H.T. Uyeda, I.L. Medintz, A.R. Clapp, and **H. Mattoussi**, "QD-Bioconjugates as Efficient Energy Donors in Fluorescence Resonance Energy Transfer Based Assays," Symposium on Nanosensing: Materials and Devices, SPIE EAST, Philadelphia, PA, October 25-28, 2004.
198. E.R. Goldman, I.L. Medintz, H.T. Uyeda, J.L. Whitley, M.E. Lassman, A. Hayhurst, and H. Mattoussi, "A Hybrid Quantum Dot-Antibody Fragment Fluorescence Resonance Energy Transfer-Based Sensor for the detection of TNT," Greater Washington Nanotechnology Alliance Special Topics Symposium, October 6 (2004).
199. H.T. Uyeda, I.L. Medintz, and H. Mattoussi, "Design and Synthesis of Dihydrolipoic Acid Based Ligands to Prepare Water Soluble Quantum Dot fluorophores," Greater Washington Nanotechnology Alliance Special Topics Symposium, October 6 (2004).

200. **(Invited)** A.R. Clapp, I.L. Medintz, **H. Mattoussi**, "Design of Quantum Dot Protein-Bioconjugate Nanosensors Based on Fluorescence Resonance Energy Transfer," The Sixth Monterey International Symposium on Technology and the Mine Problem," Monterey, CA, May 9-13, 2004.
201. **(Invited)** H.T. Uyeda, I.L. Medintz, A.R. Clapp, **H. Mattoussi**, "Design of Quantum Dot-Bioconjugates and Their Use in Developing Nanoscale Sensors Based on Fluorescence Resonance Energy Transfer," Materials Research Society Spring Meeting, San Francisco, CA, April 12-16, 2004.
202. A.R. Clapp, I.L. Medintz, E.R. Goldman, **H. Mattoussi**, "Quantum Dot-Based Fluorescence Resonance Energy Transfer Nanosensors," The Seventh European Conference on Optical Chemical Sensors and Biosensors (EUOPTROD VII), Madrid, Spain, April 4-7, 2004.
203. **(Invited)** **H. Mattoussi**, I.L. Medintz, A.R. Clapp, "QD-Bioconjugates as Efficient Energy Donors in Fluorescence Resonance Energy Transfer Based Assays," Second Annual Nanomedicine Workshop, Toronto, Canada Feb. 26-27, 2004.
204. I.L. Medintz, A.R. Clapp, **H. Mattoussi**, E.R. Goldman, and J.M. Mauro, "Nanoscale Quantum Dot-Bioconjugate Sensors Based on Förster Resonance Energy Transfer," Materials Research Society Fall Meeting 2003, Boston, MA, December 1 - 5, 2003.
205. A.R. Clapp, I.L. Medintz, J.M. Mauro, and **H. Mattoussi**, "Multiplexed Resonance Energy Transfer Using single Quantum Dot Donors in Multi-Dye Labeled Quantum Dot Protein Conjugates," Materials Research Society Fall Meeting 2003, Boston, MA, December 1 - 5, 2003.
206. H.T. Uyeda, I.L. Medintz, and **H. Mattoussi**, "Design of Water-Soluble Quantum Dots with Novel Surface Ligands for Biological Applications," Materials Research Society Fall Meeting 2003, Boston, MA, December 1 - 5, 2003.
207. **(Invited)** **H. Mattoussi**, Aaron R. Clapp, I. Medintz, E.R. Goldman, J.M. Mauro, "Luminescent Semiconductor Quantum Dot-Bioconjugates and Their Use in Biotechnological Applications," 3rd World Congress on Nanocomposites 2003, San Francisco, CA, November 10-12, 2003.
208. **(Invited)** **H. Mattoussi**, Novel Luminescent Bio-Inorganic Conjugates for Enhanced Parallel Detection Sensitivity ONR Biomolecular & Biosciences Program Review, Duck Key, FL, September 10-12, 2003.
209. **(Invited)** A.R. Clapp, I.L. Medintz, J.M. Mauro, and **H. Mattoussi** "quantum dot-bioconjugates as energy donors in fluorescence resonance energy transfer assays," 226th ACS National Meeting, New York, NY, September 7-11, 2003.
210. I.L. Medintz, **H. Mattoussi**, A.R. Clapp, E.R. Goldman, and J.M. Mauro "A prototype quantum dot FRET-based nanoscale biosensor," 226th ACS National Meeting, New York, NY, September 7-11, 2003.
211. **(Invited)** **H. Mattoussi**, Aaron R. Clapp, E.R. Goldman, J.M. Mauro, J.K. Jaiswal, and S.M. Simon, "Design of luminescent quantum dot-bioconjugates and their use in immunoassay and imaging applications," SmallTalk Conference 2003, San Jose, July 13-16, 2003.

212. J.K. Jaiswal, S.M. Simon, **H. Mattoussi**, and J.M. Mauro, "Long-term multiple color imaging of live cells using quantum dot bioconjugates," Materials Research Society Spring Meeting, San Francisco, CA, April 21-25, 2003.
213. A.R. Clapp, I.L. Medintz, E.R. Goldman, G.P. Anderson, J.M. Mauro, and **H. Mattoussi**, "CdSe-ZnS Quantum dot bioconjugates as fluorescence resonance energy transfer donors," Materials Research Society Spring Meeting, San Francisco, CA, April 21-25, 2003.
214. A. Clapp, I. Medintz, E. Goldman, G. Anderson, J.M. Mauro, and **H. Mattoussi**, "Luminescent Quantum Dot Bioconjugates in Fluorescence Resonance Energy Transfer (FRET) Assays," American Society March Meeting, Austin, TX, March 3-7, 2003.
215. M. Kuno, K.A. Higginson, S.B. Qadri, M. Yousuf, **H. Mattoussi**, and J.E. Bonevich, "Synthesis and Characterization of Colloidal Mercury Chalcogenide Quantum Dots," Materials Research Society Fall Meeting 2002, Boston, MA, December 2 - 6, 2002.
216. J. Rodríguez-Viejo, M. Chacón, A.F. Lopeandía, M.T. Clavaguera-Mora, L.R. Arana, K.F. Jensen, and **H. Mattoussi**, "Nanocalorimetric Characterization of the Size Dependent Melting Properties of CdSe Quantum Dots," Materials Research Society Fall Meeting 2002, Boston, MA, December 2 - 6, 2002.
217. **(Invited) H. Mattoussi**, E.R. Goldman, J.M. Mauro, J.K. Jaiswal, and S.M. Simon Luminescent semiconductor quantum dot-bioconjugates: novel tools for biotechnological applications," Nanohybrid Structures Workshop, The University of Chicago, IL, Nov. 15-16, 2002.
218. **(Invited) H. Mattoussi**, Novel Luminescent Bio-Inorganic Conjugates for Enhanced Parallel Detection Sensitivity ONR Biomolecular & Biosciences Program Review, Duck Key, FL, September 18-20, 2002.
219. M. Kuno, K. Higginson, and **H. Mattoussi**, "Development and characterization of colloidal HgS quantum dots," SPIE's International Symposium on Optical properties of Nanocrystals, Seattle WA, July 7-11, 2002.
220. **(Invited) H. Mattoussi**, E. R. Goldman, G. P. Anderson, and J. M. Mauro, "Nanostructures of Quantum Dot-Antibody Conjugates for Use in Biosensing," Ninth International Conference on Composites Engineering, ICCE/9, San Diego, CA, July 1-6, 2002.
221. E. R. Goldman, K. Kuno, P.T. winter, G. P. Anderson, J. M. Mauro, and **H. Mattoussi**, "Bioconjugates of CdSe-ZnS core-shell quantum dots with antibodies for use in biosensing," AVS Topical Conference on Understanding and Operating in Threat Environments, Monterey, CA, May 1 - 2, 2002.
222. J. M. Mauro, E. R. Goldman, **H. Mattoussi**, and G. P. Anderson, "Use of Luminescent CdSe-ZnS quantum dot bioconjugates in sensing applications," AVS Topical Conference on Understanding and Operating in Threat Environments, Monterey, CA, May 1 - 2, 2002.
223. P.T. Tran, E.R. Goldman, **H. Mattoussi**, J.M. Mauro, "Application of luminescent CdSe-ZnS quantum dot bioconjugates in nanosensors," SPIE's International Symposium on Laser-Tech, San Jose, CA, January 20 - 25, 2002.

224. E.R. Goldman, G.P. Anderson, P.T. Tran, **H. Mattoussi**, and J.M. Mauro; "Conjugation of luminescent quantum dots with antibodies using an engineered adaptor protein: novel reagents for fluoroimmunoassays," Materials Research Society Fall Meeting 2001, Boston, MA, Nov. 27 - Dec. 1, 2001.
225. P.T. Tran, E.R. Goldman, G.P. Anderson, J.M. Mauro, and **H. Mattoussi**, "Use of luminescent CdSe-ZnS quantum dot bioconjugates in nanosensors," 10th International Conference on II-VI Compounds, Bremen, Germany, September 9-14, 2001.
226. **(Invited)** E. R. Goldman, P. T. Tran, and G. P. Anderson, J. M. Mauro, and **H. Mattoussi**, "Bioconjugation of CdSe-ZnS core-shell quantum dots with engineered proteins for use in biosensing," 10th International Conference on II-VI Compounds, Bremen, Germany, September 9-14, 2001.
227. **(Invited)** E.R. Goldman, P.T. Tran, G.P. Anderson, J.M. Mauro, and **H. Mattoussi**, "Fluoro-immunoassays Employing Conjugates of Luminescent CdSe-ZnS Quantum Dots with Engineered Two-domain Proteins," Cambridge Healthtech Institute's Fifth Annual Advances In Assays, Molecular Labels, Signaling & Detection, Washington, DC, May 17-18, 2001.
228. P. Tran, **H. Mattoussi**, J.M. Mauro, E.R. Goldman, and G.P. Anderson, Vikram C. Sundar and Mouni G. Bawendi, "Bioconjugation of highly luminescent CdSe-ZnS quantum dots with engineered recombinant proteins for use in biosensing," 216th American Chemical Society National Meeting, San Diego, CA, April 1-5, 2001.
229. E.R. Goldman, J.M. Mauro, G.P. Anderson, **H. Mattoussi**, Vikram C. Sundar and Mouni G. Bawendi, "Non-covalent bioconjugation of two-domain recombinant proteins and luminescent quantum dots," SPIE's International Symposium on BiOS 2001, San Jose, CA, January 20 - 26, 2001.
230. **H. Mattoussi**, G.P. Anderson, J.M. Mauro, and E.R. Goldman, V.C. Sundar, F.V. Mikulec, and M.G. Bawendi, "Bioconjugation of luminescent CdSe-ZnS quantum dots to engineered recombinant proteins using self-assembly: A novel tool for biosensing," Materials Research Society Fall Meeting 2000, Boston MA, Nov. 27 - Dec. 1, 2000.
231. E.R. Goldman, J.M. Mauro, **H. Mattoussi**, and G.P. Anderson, "A two-domain recombinant protein for conjugation of luminescent quantum dots with antibodies for use in immuno-assays," Materials Research Society Fall Meeting 2000, Boston MA, Nov. 27 - Dec. 1, 2000.
232. **(Invited)** **H. Mattoussi**, G.P. Anderson, J.M. Mauro, E.R. Goldman, V.C. Sundar and M.G. Bawendi, "Improved CdSe-ZnS core-shell quantum dot bioconjugates using a recombinant protein coating: efficient tools for fluorescent detection," QD2000: International Conference on Semiconductor Quantum Dots, Munich, Germany, July 31 - August 3 (2000).
233. **H. Mattoussi**, G.P. Anderson, J.M. Mauro, and E.R. Goldman, "Improved CdSe-ZnS core-shell nanocrystal bioconjugates using specifically designed recombinant proteins," Cambridge HealthTech Institute's Fourth Annual Advances in Advances in Molecular Labels, signaling and detection: Enhancing sensitivity, accuracy, and speed, Washington, DC June 12-13, (2000).
234. **H. Mattoussi**, G.P. Anderson, J.M. Mauro, and E.R. Goldman "Direct binding of fluorescent CdSe-ZnS core shell semiconductor nanocrystals to biological macromolecules: Efficient tool for fluorescence tagging of

biological macromolecules,” American Physical Society, 2000 March Meeting, Minneapolis, MN, March 20-24 (2000).

Invited seminars

2009 – Present

- University of North Texas, Chemistry Department, Denton, TX, March 18, 2009.
- University of California Santa Barbara, Department of Chemistry, Santa Barbara, CA, April 20, 2009.
- University of California Los Angeles, the California Nanoscience Institute (CNSI), Los Angeles, CA, April 21, 2009.
- National University of Singapore, Chemistry Department Seminar, Singapore, August 13, 2009.
- Institute of Materials Research and Engineering (IMRE), Singapore, August 14, 2009.
- Florida State University, Chemistry Department, Tallahassee, FL, September 14 2009.
- Florida State University, Colloquium Chemical Engineering Department, Tallahassee, FL, October 18, 2009.
- Florida State University, Colloquium Biomedical Sciences Department, Tallahassee, FL, November 18, 2009.
- ONR ASN Top Scientist & Engineers of the Year Series, Office of the naval Research (ONR), March 10, 2010.
- University of Florida, Gainesville, Condensed Matter Physics Seminar, April 12, 2010.
- Florida State University, Colloquium Department of Chemistry and Biochemistry, November 19, 2010.
- Ecole de Physique et Chimie Industrielle (ESPCI) Colloquium, Paris, May 13, 2011.
- Iberian Nanotechnology Laboratory (INL) Seminar, Braga, Portugal, May 16, 2011.
- University College London, Colloquium Department of Physics & Astronomy, May 18, 2011.
- University of Liverpool, Colloquium Chemistry Department (Liverpool, UK), May 20, 2011.
- Ohio University Athens (OH), Colloquium Physics Department, May 27, 2011.
- Florida Agricultural University (FAMU), Physics Department, November 3, 2011.
- University of Illinois at Chicago, Colloquium Chemistry Department, November 17, 2011.
- University of Chicago, Physics Seminar at the James Frank Institute, November 18, 2011.
- University of Bologna, Italy, Colloquium Department of Chemistry May 14, 2012.
- University Autonome de Barcelona, Spain, Colloquium Department of Physics, May 17, 2012.
- The Scripps research institute, Colloquium Department of Chemistry, June 15, 2012.
- Technical University Berlin, Germany, Institute of Nano-photonics Seminar, July 20, 2012.
- Florida State University, Seminar at the Molecular Biophysics Graduate Program (MOB), October 22, 2012.
- University of Arkansas, Colloquium Department of Chemistry, Little Rock, AK, February 18, 2013.
- University of Potsdam, Colloquium Institute of Chemistry (Potsdam, Germany), June 4, 2013.
- University of Hamburg, Germany, Colloquium Institute of Chemistry (Hamburg, Germany), June 6, 2013.
- Free University Berlin, Department of Chemistry Seminar (Berlin, Germany), June 8, 2013.

- Free University Berlin, Colloquium Leibniz-Institute for Molecular Pharmacology (Berlin, Germany), June 8, 2013.
- Nicolaus Copernicus University, Colloquium Institute of Physics (Torun, Poland), June 11, 2013.
- Indian Association for the Cultivation of Science (IACS), Colloquium Materials Science (Kolkata, India), July 19, 2013.
- Indian Institute of Technology Chennai, Colloquium Chemistry Department, July 22, 2013.
- Rutgers University, Colloquium Department of Chemistry, New Brunswick, NJ, October 22, 2013.
- Purdue University/Indiana University Indianapolis, Indianapolis, IN, October 30, 2013.
- Carnegie Mellon University, Colloquium Department of Chemistry, Pittsburgh, PA, November 14, 2013.
- Nanomedicine-Nanotech Interest Group (Nano-SIG) seminar series, NIH Bethesda, MD, December 17 2013.
- National Cancer Institute (NCI/NIH) seminar, Frederick, MD, December 18, 2013.
- Louisiana State University, Colloquium Department of Chemistry, Baton Rouge, LA, March 14, 2014.
- University of Montreal, Faculté de Pharmacie Colloquium, Montreal, Canada, May 28, 2014.
- Bowling Green State University, Colloquium Department Chemistry, February 19, 2015.
- Institut Curie, Paris, l'Unité Physico-Chimie Curie Seminar, May 27, 2015.
- King Abdallah University of Science and Technology (KAUST) Colloquium, Thuwal, Saudi Arabia, May 30, 2015.
- University of Ulster, College of Pharmacy Colloquium (Corelaine, Northern Ireland, UK), June 25, 2015.
- University of Hamburg, Colloquium Institute of Chemistry (Hamburg, Germany), Germany, June 28, 2016.
- Université de Paul Sabatier, Colloquium Laboratoire de Chimie de Coordination, LCC (Toulouse, France), June 20, 2016.
- Université de Paul Sabatier, Laboratoire de Chimie de Coordination Seminar (Toulouse, France) July 21, 2016.
- Vanderbilt University, Colloquium Department of Chemistry, Nashville, TN, November 14, 2016.
- The Scripps Research Institute, La Jolla, CA. Department of Chemistry Seminar, April 6, 2017.

2000 – 2008

- Stanford University, Howard Hughes Institute, Palo Alto, CA.
- University of California Santa Cruz, Department of Chemistry, Santa Cruz, CA.
- University of Massachusetts Amherst, Department of Polymer Science, Amherst, MA.
- The Johns Hopkins University, Chemical Engineering Department, Baltimore, MD.
- Southern Illinois University, Department of Chemistry, Carbondale, IL.
- The University of Chicago, James Frank Institute, Chicago, IL.
- Yonsei University, Department Southern Illinois University of Chemistry, Seoul, South Korea.
- Seoul National University, Department of Chemistry, Seoul, South Korea.
- Samsung Research Center, Seoul, South Korea.
- University of Barcelona, Department of Physics (Barcelona, Spain).
- Massachusetts General Hospital, the Burn Hospital, Harvard University.

- University of Lecce, National Nanotechnology Lab (Lecce, Italy).
- Dortmund University, Department of Physics (Dortmund, Germany).
- University of Texas Austin, Chemistry and Biochemistry, Austin, TX.
- Florida State University, Chemistry and Biochemistry, Tallahassee, FL.
- University of Miami, Department of Chemistry, Miami, FL.
- University of Central Florida, Chemistry Department, Orlando, FL.
- Massachusetts General Hospital (MGH), Harvard University, Cambridge, MA.
- Northeastern University, Department of Chemistry, Boston, MA.
- University of Dortmund, Gambinus Fellowship Lecture (Dortmund, Germany).
- Georgetown University, Medical school, Washington, DC.
- Scripps Research Institute, Departments of Cell Biology & Chemistry, La Jolla, CA.
- University of Washington Seattle, Department of Biomedical Engineering, Seattle, WA.
- Stanford University, Medical School, Palo Alto, CA.
- University of Florida, Chemical Engineering, Gainesville, FL.
- Boston University, Chemistry and Biomolecular Engineering, Boston, MA.
- Lawrence Berkeley National Lab., Berkeley, CA.
- NCI/NIH Frederick, MD.
- Cornell University, Biomedical Engineering, Ithaca, NY.
- Georgia Institute of Technology, Biomedical Engineering Department, Atlanta, GA.
- Florida State University, MARTEH Center, Tallahassee, FL.
- SUNY Stony Brook, Materials Science Center, Stony Brook, NY.
- Emory University, Biomedical Engineering Department, Atlanta, GA.
- University of Florida, Chemistry Department, Gainesville, FL.
- Quantum Dot Corporation, Hayward, CA.
- American Physical Society, College Park, MD.
- EIC Laboratories.
- University of South Florida, Department of Electrical Engineering.
- University of Florida, Department of Physics.
- University of California San Diego, Biomedical Engineering Department.
- The Scripps Research Institute, La Jolla.
- Los Alamos National Laboratory.
- University of California Los Angeles.
- University of Texas Austin, Center for Materials Science.
- Boston University, Biomedical Engineering Department.
- University of Massachusetts Amherst, Chemical Engineering Department.
- University of Barcelona Department of Physics (Barcelona, Spain).
- Philips Laboratories (Eindhoven, Holland).
- Laboratoire Léon Brillouin, (CEN Saclay France).

- QD Corporation (Palo Alto, CA).
- University of Florida Department of Physics.
- NIH National Cancer Division Bethesda, MD.
- Atto Bioscience Rockville, MD.
- Georgia Institute of Technology, Department of Chemistry and Textile Engineering.
- Ecole Polytechnique Fédérale de Lausanne, EPFL (Switzerland).
- University of Dortmund, Department of Physics, Germany.
- CEA Department of Fundamental Research, Grenoble France.
- University of Wisconsin-Milwaukee, Department of Chemistry.