DR. MARK A. OLSON

92 Weijin Road, Nankai District *+86-(185)-2279-5357*
Tianjin 300072 P.R. China *www.olsonlaboratory.com* *molson@tju.edu.cn*

EDUCATION

PhD Chemistry – August 2010 **Northwestern University (NU)**, Evanston, IL, USA
PhD Advisor: Professor Sir J Fraser Stoddart (2016 Nobel Prize Winner)
Thesis: The Materials Chemistry of the Mechanical Bond and its Supramolecular Precursors: Their Formation under Kinetic and Thermodynamic Control

Began graduate career at UCLA followed by a group move to NU

BSc Chemistry – May 2005 **Texas A&M University,** Corpus Christi, TX, USA

PROFESSIONAL EXPERIENCE

Tianjin University Tianjin, Peoples Republic of China
National 1000 Plan Young Professor of Chemistry 2015–Present
School of Pharmaceutical Science and Technology

Texas A&M University Corpus Christi Corpus Christi, TX, USA
Assistant Professor of Chemistry 2010–2015
College of Science and Engineering

Northwestern University Evanston, IL, USA
Graduate Research Assistant 2007–2010

- PhD Advisor: Professor Sir J Fraser Stoddart
- Designed both a thermodynamic and a kinetic route to switchable side-chain polycatenanes
- Incorporated molecular and supramolecular switches onto the surfaces of metal-nanoparticles
- Identified both translational isomers of a bistable [2]catenane in the solid-state
- Observed both positive and negative electrostatic cooperativity in charged chemical systems
- Mastered the art of growing single crystals suitable for X-ray crystallographic analysis

University of California at Los Angeles (UCLA) Los Angeles, CA, USA
California Nanosystems Institute (CNSI) 2005–2007
Graduate Research Assistant

- PhD Advisor: Professor Sir J Fraser Stoddart
- Organic synthesis / purification of mechanically interlocked molecular switches (MIMS)
- Investigated the application of the azide-alkyne Huisgen cycloaddition towards MIMS
- Design / characterization of organic nano-structured materials / polymers for device applications

University of California at Los Angeles (UCLA) Los Angeles, CA, USA
Teaching Assistant 2005–2007

- Supervised / Taught undergraduate organic chemistry I and II laboratory
- Supervised / Taught undergraduate biochemistry I laboratory
- Wrote quizzes, exam questions, developed lesson plans

Texas A&M University Corpus Christi, TX, USA
Undergraduate Research Assistant 2003–2005

- Advisors: Professors Eugene and Fereshteh Billiot
- Use of steady-state fluorescence spectroscopy to characterize novel amino acid-based surfactants
- Monitored interactions of known endocrine disrupters with Human Chorionic Gonadotropin

California Institute of Technology (CALTECH) Pasadena, CA, USA
Undergraduate Research Assistant, June–September 2004

- Advisor: Professor Jack L Beauchamp
- Developed fluorescent chemical sensors for the gas phase determination of enantiomeric excess
- Synthesized novel solvatochromic fluorescent probes

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AWARDS & PROFESSIONAL ACTIVITIES

National/International:

China Recruitment Program of Global Experts National Youth 1000 Plan Scholar
Reviewer for Nature Chemistry, Angewandte Chemie, Chemistry of Materials, Chemical Communications, JACS, Soft Matter, ACS Applied Mat. And Interfaces, and Nanoscale
Distinguished Outstanding Young Alumnus Award: Texas A&M University CC 2014
Panelist for the Department of Defense (DoD) National Defense Science and Engineering Graduate (NDSEG) Fellowship evaluation (2012)

State (TEXAS):

Advisory Panelist in the area of nanoscience and defense for the Tropical Texas Regional Center of Innovation and Commercialization (2012−Present)
9th Annual Texas A&M University System Pathways Symposium Judge (2011)

Texas A&M University Corpus Christi:

Honors Program Outstanding Faculty Award (2014)
Panelist for Hispanics in STEM Careers Expo (2012)
Panelist for Chemistry Club's Science Innovation in the Field of Chemistry (2012)
Texas Research Development Fund Grant Award (2012−2013)
Title V: STEM Outreach, Access, and Retention Renovation Award (2012)
College of Science and Engineering Distinguished Speaker Committee (2012−Present)
Coastal Bend Regional Science Fair Judge (2011)
Curriculum Committee (2011−Present)
Masters in Chemistry Graduate Program Development Committee (2011−Present)
Environmental Health and Safety Committee (2011−Present)
McNair Scholars Advisory Committee (2011−Present)
Texas A&M University Corpus Christi Research Enhancement Grant Award (2011−2012)
Biochemistry Faculty Search Committee (2010 and 2011)
Corpus Christi Chemistry Club Faculty Advisor (2010−Present)
Howard Hughes Institute Research Fellow (2004)
Welch Research Fellow (2003–2004)
NSF Louis Stokes Alliances for Minority Participation Program Fellow (2003)
Citgo Refining Math/Science Challenge scholarship recipient (2000–2004)
University Honors scholarship recipient (2000–2004)

Tianjin University:

Top Ten Supervisor of Tianjin University
Distinguished Youth Faculty Model for Teaching and Education of Tianjin University

TEACHING

CHEM 1411 General Chemistry I
CHEM 3411 Organic Chemistry I
CHEM 3412 Organic Chemistry II
CHEM 4490 Special Topics: Molecular Spectroscopy
CHEM 4696 and 5596 - Directed Independent Research:
Enthalpic and Entropic Contributions to the Free Energy of Template-Directed Micellization
Synthesis of Bipyridinium-based Smart Detergents for Programmed Self-Assembly
Template-Directed Micellization of Bipyridinium-based Electroactive Surfactants
Self-Assembly of Noncovalently Functionalized Carbon Nanotubes
On the Synthesis of Charged Electroactive Surfactants
Safety Issues Related to Organic Chemistry
Synthesis of Dynamic Self-Assembling Electroactive Polymer Blends

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PUBLICATIONS

RESEARCHER ID: C-1083-2008
ORCID ID: 0000-0003-0398-5063

TIMES CITED: 1316 **H-INDEX:17**

1. Prakasam, T.; Devaraj, A.; Saha, R.; Lusi, M.; Brandel, J.; Esteban-Gomez, D.; Platas-Iglesias, C.; **Olson, M. A**.; Mukherjee, P.; Trabolsi, A., "Metal-Organic Self-Assembled Trefoil Knots for C-Br Bond Activation" *ACS Catal*. **2018**, ACCEPTED.

2. Das, G.; Benyettou, F.; Sharama, S. K.; Prakasam, T.; Gandara, F.; De la Pena-O'Shea, V. A.; Pasricha, R.; Jagannathan, R.; **Olson, M. A.**; Trabolsi, A., "Covalent Organic Nanosheets for Bioimaging" *Chem. Sci*. **2018**, 9, 8382−8387.

3. Xu, Y.; Yuan, T.; Nour, H. F.; Fang, L.; **Olson, M. A.**, "Bis-Bipyridinium Gemini Surfactant-Based Supramolecular Helical Fibers and Solid State Thermochromism" *Chem. Eur. J*. **2018**, 24, 16553−16557. **Selected for Journal Cover, Selected as Very Important Paper (VIP)**

4. Yuan, T.; Sun, Z.; Mu, A. U.; Zeng, M.; Kalin, A. J.; Cheng, Z.; **Olson, M. A.**; Fang, L, "Assembly and Chiral Memory Effect of Dynamic Macroscopic Supramolecular Helices" *Chem. Eur. J*. **2018**, 24, 16558−16570. **Selected for Journal Cover**

5. Wang, Z.; Cui, H.; Sun, Z.; Roch, L. M.; Goldner, A. N.; Nour, H. F.; Sue, A. C.-H.; Baldridge, K. K.; **Olson, M. A.** "Melatonin-Directed Micellization: A Case for Tryptophan Metabolites and their Classical Bioisosteres as Templates for the Self-Assembly of Bipyridinium-Based Supramolecular Amphiphiles in Water" *Soft Matter*. **2018**, 14, 2893−2905.

6. Guo, M.; Wang, X.; Zhan, C.; Demay-Drouhard, P.; Li, W.; Du, K.; **Olson, M. A.**; Zuilhof, H.; Sue, A. C.-H. "Rim-Differentiated C5-Symmetric Tiara-Pillar[5]arenes" *J. Am. Chem. Soc.* **2018**, *140*, 74−77.

7. Yuan, T.; Xu, Y.; Zhu, C.; Jiang, Z.; Sue, H.-J.; Fang, L.; **Olson, M. A.** "Tunable Thermochromism of Multifunctional Charge-Transfer-Based Supramolecular Materials Assembled in Water" *Chem. Mater.* **2017**, *29*, 9937−9945. **Selected for Journal Front Cover**

8. Wang, Z.; Nour, H. F.; Roch, L. M.; Guo, M.; Li, W.; Baldridge, K. K.; Sue, A. C.-H.; **Olson, M. A.** "[3+3] Cyclocondensation of Disubstituted Biphenyl Dialdehydes: Access to Inherently Luminescent and Optically Active Hexa-substituted C3-Symmetric and Asymmetric Trianglimine Macrocycles" *J. Org. Chem.* **2017**, *82*, 2472−2480.

9. Wen, H.; Li, W.; Chen, J.; He, G.; Li, L.; **Olson, M. A.**; Sue, A. C.-H., Stoddart, J. F., Xuefeng, G. "Complex Formation Dynamics in a Single-Molecule Electronic Device" *Science Advances*. **2016**, *11*, e1601113.

10. Yuan, T; Vazquez, M.; Goldner, A. N.; Xu, Y.; Contrucci, R.; Firestone, M. A.; **Olson, M. A.**; Fang, L. "Versatile Thermochromic Supramolecular Materials Based on Competing Charge Transfer Interactions" *Adv. Funct. Mater*. **2016**, *47*, 8604−8612. **Selected for Journal Inside Cover. Top 10 for the month of November. Highlighted in *Advanced Science News*.**

11. **Olson, M. A.**; Messina, M. S; Thompson, J. R.; Dawson, T. J.; Goldner, A. N.; Gaspar, D. K.; Vazquez, M.; Lehrman, J. A.; Sue, A. C.-H. "Reversible Morphological Changes of Assembled Supramolecular Amphiphiles Triggered by pH-Modulated Host-Guest Interactions" *Org. Biomol. Chem.* **2016**, *14*, 5714−5720. **Part of the *New Talent* Themed Collection**

12. **Olson, M. A.** "Metal-Organic Frameworks: Shuttling in the Solid State" *Nature Chem*. **2015**, *7*, 470−471. **Invited News and Views Article**

13. **Olson, M. A.**; Thompson, J. R.; Dawson, T. J.; Hernandez, C. M.; Messina, M. S.; O'Neal, T. "Template-directed Self-Assembly by Way of Molecular Recognition at the Micellar-Solvent Interface: Modulation of the Critical Micelle Concentration" *Org. Biomol. Chem.* **2013**, 11, 6483−6492. **Selected for Journal Front Cover.**

14. Fahrenbach, A. C.; Hartlieb, K. J.; Sue, C. –H.; Bruns, C. J.; Barin, G.; Basu, S.; **Olson, M. A.**; Botros, Y. Y.; Bagabas, A.; Khdary, N. H.; Stoddart, J. F. "Rapid Thermally Assisted Donor-Acceptor Catenation" *Chem. Commun*. **2012**, *48*, 9141−9143.

15. Wang, C.; Cao, D.; Fahrenbach, A. C.; Fang, L.; **Olson, M. A.**; Friedman, D. C.; Basu, S.; Dey, S. K.; Botros, Y. Y.; Stoddart, J. F. " Solvent-Dependent Ground State Distributions in a Donor-Acceptor Redox-Active Bistable [2]Catenane" *J. Phys. Org. Chem*. **2012**, *25*, 544−552.

16. Barin, G.; Coskun, A.; Friedman, D. C.; **Olson, M. A.**; Colvin, M. T.; Carmielli, R.; Dey, S. K.; Bozdemir, O. A.; Wasielewski, M. R.; Stoddart, J. F. "A Multistate Switchable [3]Rotacatenane" *Chem. Eur. J.* **2011**, *17*, 213−222.

17. Basu, S.; Coskun, A.; Friedman, D. C.; **Olson, M. A.**; Benítez, D.; Tkatchouk, E.; Barin, G.; Yang, J.; Fahrenbach, A. C.; Goddard, W. A.; Stoddart, J. F. "Donor-Acceptor Oligorotaxanes Made to Order" *Chem. Eur. J.* **2011**, *17*, 2107−2119.

18. Olsen, J. –C.; Fahrenbach, A. C.; Trabolsi, A.; Friedman, D. C.; Dey, S. K.; Gothard, C. M.; Shveyd, A. K.; Gasa, T. B.; Spruell, J. M.; **Olson, M. A.**; Wang, C.; Jacquot de Rouville, H. –P., Botros, Y. Y.; Stoddart, J. F. "A Neutral Redox-Switchable [2]Rotaxane" *Org. Biomol. Chem*. **2011**, *9*, 7126−7133.

19. Dey, S. K.; Beuerle, F.; **Olson, M. A.**; Stoddart, J. F. "Arranging Pseudorotaxanes Octahedrally Around [60]Fullerene" *Chem. Commun*. **2011**, *47*, 1425–1427.

20. **Olson, M. A.**; Wang, C.; Fang, L.; Benítez, D.; Tkatchouk, E.; Basu, S.; Basuray, A. N.; Zhang, D.; Zhu, D.; Goddard, W. A.; Stoddart, J. F. "The Dynamic Stereochemistry of a Bistable Donor-Acceptor [2]Catenane" *Proc. Natl. Acad. Sci. USA* **2010**, *107*, 13991–13996.

21. Spruell, J. M.; Coskun, A.; Friedman, D. C.; Forgan, R. S.; Sarjeant, A. A.; Trabolsi, A.; Fahrenbach, A. C.; Barin, G.; Paxton, W. F.; Dey, S. K.; **Olson, M. A.**; Benítez, D.; Tkatchouk, E.; Colvin, M. T.; Carmielli, R.; Caldwell, S. T.; Rosair, G. M.; Hewage, S. G.; Duclairoir, F.; Seymour, J. L.; Slawin, A. M. Z.; Goddard, W. A.; Wasielewski, M. R.; Cooke, G.; Stoddart, J. F. "Highly Stable Tetrathiafulvalene Radical Dimers in [3]Catenanes" *Nature Chem.* **2010**, *2*, 870–879.

22. **Olson, M. A.**; Botros, Y. Y.; Stoddart, J. F. "Mechanostereochemistry" *Pure Appl. Chem*. **2010**, *82*, 1569–1574.

23. Deng, H.; **Olson, M. A.**; Stoddart, J. F.; Yaghi, O. M. "The Concept of Robust Dynamics" *Nature Chem.* **2010**, *2*, 439–443.

24. **Olson, M. A.**; Coskun, A.; Fang, L.; Basuray, A.; Stoddart, J. F. "Polycatenation Under Thermodynamic Control" *Angew. Chem. Int. Ed*. **2010**, *49*, 3151–3156.

25. Coskun, A.; Klajn, R.; Trabolsi, A.; Fang, L.; **Olson, M. A.**; Wesson, P. J.; Dey, D. K.; Grzybowski, B. A.; Stoddart, J. F. "Molecular-Mechanical Switching at the Metal Nanoparticle-Solvent Interface: Practice and Theory" *J. Am. Chem. Soc.* **2010**, *132*, 4310–4320.

26. Fang, L.; **Olson, M. A.**; Stoddart, J. F. "Mechanically Bonded Macromolecules" *Chem. Soc. Rev.* **2010**, 39, 17–29. **Selected for Journal Front Cover.**

27. **Olson, M. A.**; Braunschweig, A. B.; Fang, L.; Ikeda, T.; Klajn, R.; Trabolsi, A.; Mirkin, C.; Wesson, P.; Benitez, D.; Grzybowski, B. A.; Stoddart, J. F. "A Bistable Poly[2]catenane Forms Nanosuperstructures" *Angew. Chem. Int. Ed.* **2009**, *48*, 1792–1797.

28. **Olson, M. A.**; Coskun, A.; Klajn, R.; Fang, L.; Dey, S. K.; Browne, K.; Grzybowski, B. A.; Stoddart, J. F. "Assembly of Polygonal Nanoparticle Clusters Directed By Reversible Noncovalent Bonding Interactions" *Nano Lett.* **2009**, *9*, 3185–3190.

29. **Olson, M. A.**; Braunschweig, A.; Ikeda, T.; Fang, L.; Trabolsi, A.; Slawin, A. M. Z.; Stoddart, J. F. "Thermodynamic Forecasting of Mechanically Interlocked Switches" *Org. Biomol. Chem.* **2009**, *7*, 4391–4405. **Highlighted as HOT ARTICLE: OBC website. Selected for Journal Front Cover.**

30. Klajn, R.; **Olson, M. A.**; Fang, L.; Coskun, A.; Wesson, P. J.; Trabolsi, A.; Stoddart, J. F.; Grzybowski, B. A. "On-demand Capture and Release of Metal Nanoparticles Using a Functional Polymer*"* *Nature Chem.* **2009**, 1, 733–738.

31. Fang, L.; Hmadeh, M.; Wu, J.; **Olson, M. A.**; Spruell, J. M.; Trabolsi, A.; Yang, Y.-W.; Elhabiri, M.; Albrecht-Gary, A.-M.; Stoddart, J. F. "Acid-Based Actuation of [c2] Daisy Chains" *J. Am. Chem. Soc.* **2009**, *131*, 7126–7134.

32. Klajn, R.; Fang, L.; Coskun, A.; **Olson, M. A.**; Grzybowski, B. A.; Stoddart, J. F. "Metal Nanoparticles Functionalized with Molecular and Supramolecular Switches" *J. Am. Chem. Soc.* **2009**, *131*, 4233–4235.

33. Braunschweig, A. B.; Dichtel, W. R.; Miljanić, O. Š.; **Olson, M. A.**; Spruell, J. M.; Khan, S. I.; Heath, J. R.; Stoddart, J. F. "Modular Synthesis and Dynamics of a Variety of Donor-Acceptor Interlocked Compounds Prepared by a Click Chemistry Approach" *Chem. Asian J.* **2007**, *2*, 634–647.

SELECTED PRESENTATIONS

1. Olson, M. A. "Exploring the Optical Properties of Non-Stoichiometric Hydrates and Anhydrates of Donor-Acceptor Charge Transfer Salts" **Singapore International Chemistry Conference (SICC2018), National University of Singapore, Singapore**, Dec. 2018. INVITED

2. Olson, M. A. "Exploring the Optical Properties of Non-Stoichiometric Hydrates and Anhydrates of Donor-Acceptor Charge Transfer Salts" **6th Thailand International Nanotechnology Conference (ThaiNano 2018), Bangkok, Thailand**, Dec. 2018. INVITED

3. Olson, M. A. "Exploring the Optical Properties of Non-Stoichiometric Hydrates and Anhydrates of Donor-Acceptor Charge Transfer Salts" **Global Young Talents Forum, Beijing University of Chemical Technology (BUCT), Beijing, China**, Oct. 2018. INVITED

4. Olson, M. A. "Exploring the Optical Properties of Non-Stoichiometric Hydrates and Anhydrates of Donor-Acceptor Charge Transfer Salts" **Conference on Promoting New Chemistry, Beijing Institute of Technology (BIT), Beijing, China**, Sept. 2018. INVITED

5. Olson, M. A. "Exploiting Tunable Hydrochromism of Multifunctional Charge Transfer-Based Supramolecular Materials Assembled in Water" **International Conference on Molecular Sensors and Molecular Logic Gates (MSMLG), Dalian, China**, June 2018. INVITED

6. Olson, M. A. "Thermochromic Supramolecular Materials Based on Competing Charge Transfer Interactions" **OCDS Colloquium Seminar Series, University of California Los Angeles (UCLA)**, Apr. 2018. INVITED

7. Olson, M. A. "Thermochromic Supramolecular Materials Based on Competing Charge Transfer Interactions" **EEWS & Department of Chemistry Seminar Series, Korea Advanced Institute of Science and Technology (KAIST)**, Mar. 2018. INVITED

8. Olson, M. A. "Thermochromic Supramolecular Materials Based on Competing Charge Transfer Interactions" **Workshop on Supramolecular Chemistry & Materials, Hong Kong Baptist University, Hong Kong, China**, Dec. 2017. INVITED

9. Olson, M. A. "Thermochromic Supramolecular Materials Based on Competing Charge Transfer Interactions" **The 7th International Conference on Nanoscience and Nanotechnology: ChinaNANO 2017, Beijing, China**, Aug. 2017.

10. Olson, M. A. "Thermochromic Supramolecular Materials Based on Competing Charge Transfer Interactions" **14th International Conference on Calixarenes: Calix2017, Nankai University, Tianjin, China**, Aug. 2017. INVITED

11. Olson, M. A. "Chemistry While You Were Sleeping" **A Golden Age for Chemistry, University of Nottingham, Nottingham, United Kingdom**, June 2017. INVITED

12. Olson, M. A. "Molecular Templation and Self-Assembly in Water: Developing Soft Matter-Based Functional Materials" **International Symposium of Frontier Sciences on New Drug Discovery, Wuhan University, Wuhan, China**, Oct. 2016. INVITED

13. Olson, M. A. "Molecular Templation and Self-Assembly in Water: Developing Soft Matter-Based Functional Materials" **WuXi AppTec Pharmaceutical Company, Tianjin, China**, Sept. 2016. INVITED

14. Olson, M. A. "Molecular Templation and Self-Assembly in Water: Developing Soft Matter-Based Functional Materials" **International Conference on Molecular Sensors and Molecular Logic Gates (MSMLG), Bath, United Kingdom**, July 2016.

15. Olson, M. A. "Molecular Templation of Soft Matter in Water" **American Chemical Society (ACS) Local Meeting, Texas A&M University Kingsville, Kingsville, Texas**, Oct. 2014. INVITED

16. Olson, M. A. "Molecular Templation of Soft Matter in Water: from the Micellar Cradle to the Crystalline Grave" **Los Alamos and Sandia National Laboratories' Center for Integrated Nanotechnologies User Meeting, Santa Fe, New Mexico**, Sept. 2014. INVITED

17. Olson, M. A. "Template-Directed Self-Assembly at the Micellar-Solvent Interface" **Organic and Diversity Seminar Series, Texas A&M University College Station, College Station, Texas**, Feb. 2014. INVITED

18. Olson, M. A. "Molecular Templation in Soft Materials Chemistry: Interactions at the Mechanical Bond, Polymer, Nanoparticle, and Micellar-Solvent Interface" **Chemistry Department Organic Division Guest Lecture Weekly Seminar, University of Connecticut, Storrs, Connecticut**, Feb. 2014. INVITED

19. Olson, M. A. "Molecular Templation at the Micellar-Solvent Interface" **Chemistry Department Guest Lecture Weekly Seminar, University of Texas at Dallas, Dallas, Texas**, Jan. 2014. INVITED

20. Olson, M. A. "Molecular Templation in Soft Materials Chemistry: Interactions at the Mechanical Bond, Polymer, Nanoparticle, and Micellar-Solvent Interface" **Symposium on Directions in Modern Pharmaceutical Science, Tianjin University, Tianjin, China**, Dec. 2013. INVITED

21. Olson, M. A. "Molecular Templation in Soft Materials Chemistry: Interactions at the Mechanical Bond, Polymer, Nanoparticle, and Micellar-Solvent Interface" **QianQing 1000 Talent Symposium, Beijing, China**, Sept. 2013. INVITED

22. Olson, M. A. "Targeting Minorities in STEM Fields at a Hispanic Serving Institution: I am Living Proof!" **National Council of University Research Administrators Region V Spring Meeting. Oklahoma City, Oklahoma**, April 2013. INVITED

23. Olson, M. A. "Before I was One of Them, I was One of You: Memoirs of a Chemistry Lover" **NSF REU-Life Sciences Symposium. Texas A&M University Corpus Christi, Corpus Christi, Texas**, March 2013. INVITED

24. Olson, M. A. "The Materials Chemistry of the Mechanical Bond: From Supramolecular Complexity to Topological Simplicity Part 1" **Harte Research Institute Seminar Series. Texas A&M University, Corpus Christi, Texas**, November 2012.

25. Olson, M. A. "Reversible Docking and Template-Directed Detergency Activation at the Micelle-Solvent Interface" **Northwestern University Center for the Chemistry of Integrated Systems Research Symposium. Northwestern University, Evanston, Illinois**, May 2012.

26. Olson, M. A. "From A&M to the Shoulders of Giants: Consequences of My Addictive Chemical Romance" **South Texas Chapter of Sigma Xi 11th Annual Distinguished Seminar. Corpus Christi, Texas**, October 2011. INVITED

27. Olson, M A.; Klajn, R.; Fang, L.; Coskun, A.; Grzybowski, B. A.; Stoddart, J. F. "Dynamic Hook-and-Eye Nanoparticulate Templation." **International Symposium on Macrocyclic & Supramolecular Chemistry (ISMSC), Maastricht, Netherlands**, June 2009.

28. Olson, M. A.; Benitez, D.; Braunschweig, A. B.; Ikeda, T.; Stoddart, J. F. "Bistable side-chain poly[2]catnanes: A mechanically switchable polymer." **236th ACS National Meeting, Philadelphia, Pennsylvania**, August 2008.

29. **Olson, M. A.**; Benitez, D.; Braunschweig, A. B.; Ikeda, T.; Stoddart, J. F. "Bistable side-chain poly-[2]catnanes: A mechanically switchable polymer." **Opportunities for Nanostructured Polymeric Materials for Device Fabrication: ACS Polymer Division, Lake Tahoe, Nevada**, November 2007.

30. **Olson, M. A.**; Kang, S.; Mendes, P.; Braunschweig, A.; Aprahamian, I.; Saha, S.; Leung, K.; Stoddart, J. F. "Self-assembly of Quantum Dot Architectures: Towards Molecular Spin Transfer Channels." **Center for Nanoscience Innovation for Defense PI Meeting. Santa Monica, California**, June 2006.

31. **Olson, M. A.**; Hodyss, R.; Beauchamp, J. "Discrimination of Enantiomeric Forms of Amino Alcohols using Fiber Optic Fluorescence Spectroscopy." **California Institute of Technology SURF seminar day. CALTECH, Pasadena, California**, August 2004.

32. **Olson, M. A.**; Faybeshev, M.; Billiot, E. "Characterization and Comparison of the Physical Properties of a Novel Class of Branched Amino-Acid Based Surfactants Versus Their Linear Counterparts." **Council on Undergraduate Research (CUR) Posters on the Hill Conference. Washington DC**, April 2004.

GRANTS FUNDED

1. Siegel, J. (Principal); Stoddart, J. F. (Co-Principal); Baldridge, K. K. (Co-Principal); **Olson, M. A.** (Co-Principal); Huang, J. (Co-Principal); Du, Y. (Co-Principal) et. al., "The Fundamental and Frontier Studies of the New Topology of Molecular Functional Carbon Materials" Sponsored by the National Basic Research Program (973 Program) of China, 25,000,000.00 RMB ($4,034,926.50 USD) (2015–2019).

2. **Olson, M. A.** (Principal) "Ductless Bench Top Fume Hoods for Organic Chemistry Teaching Lab" Sponsored by TAMUCC SOAR Title V: STEM Outreach, Access, and Retention Renovation Award, $17,213.00. (July 2012)

3. **Olson, M. A.** (Principal), "Template-Directed Detergency Activation and Deactivation in Micellar Binary Blends: A Pathway to the NSF Early Career Grant" Sponsored by TAMUCC Office of Research and Scholarly Activity, Texas Research Development Fund, $25,000.00. (June 2012–August 2013).

4. Billiot, F. H. (Principal); Larkin, P. D. (Co-Principal); Billiot, E. J. (Co-Principal); Causgrove, T. P. (Co-Principal); **Olson, M. A.** (Co-Principal); Silliman, J. E. (Co-Principal), "Chemistry Department Research Training Grant" Sponsored by the Welch Foundation, $35,000.00. (June 2012–May 2013).

5. Billiot, F. H. (Principal); Larkin, P. D. (Co-Principal); Billiot, E. J. (Co-Principal); Causgrove, T. P. (Co-Principal); **Olson, M. A.** (Co-Principal); Silliman, J. E. (Co-Principal), "Chemistry Department Research Training Grant" Sponsored by the Welch Foundation, $25,000.00. (June 2011–May 2012).

6. **Olson, M. A.** (Principal), "Molecular Architectonic Tuning at the Carbon Nanotube Solvent Interface" Sponsored by TAMUCC Office of Research and Scholarly Activity, Research Enhancement Grant, $7,881.00. (September 2011–August 2012).

RESEARCH INTERESTS SUMMARIZED BY KEY WORDS

SUPRAMOLECULAR CHEMISTRY, SOFT MATTER AND NANOSCIENCE: molecular recognition processes • molecular switches • self-assembly processes • template-directed self-assembly • concept transfer from the life sciences into materials science • programmed detergency • polymer blends • electrostatics • interfacial molecular interactions • chemical sensors • molecular electronics • aerogels • thin film processing • thermochromics • 3D printing

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92 Weijin Road, Nankai District *+86-(185)-2279-5357*
Tianjin 300072 P.R. China *www.olsonlaboratory.com* *molson@tju.edu.cn*

RESEARCH COLLABORATORS (TAMUCC/TJU)

The following research personnel have been/are independently supervised by me:

	Names	(Dates)	Financial Support	Degree/Position
1.	**Mark A Tuck**	(2010–2011)	Welch Foundation Research Fellow	BS Chemistry
2.	**Jonathan R. Thompson**	(2011–2012)	Welch Foundation Research Fellow	Post Baccalaureate
3.	**Trenton J. Dawson**	(2011–2013)	Welch Foundation Research Fellow	BS Chemistry
4.	**Marco Messina**	(2011–2014)	NSF LSAMP Research Fellow	BS Chemistry
5.	**Chris Hernandez**	(2011–2013)	NSF LSAMP Research Fellow	BS Chemistry
6.	**Brenda De Leon**	(2012)	Directed Independent Study	BS Chemistry
7.	**Edward Garza**	(2012)	Visiting High School Student	----------
8.	**Hui Cui**	(2012–2015)	Texas Research Development Fund	MS Environmental Sci.
9.	**Josh Wondra**	(2012)	Welch Foundation Research Fellow	BS Biology
10.	**Shaun P. McKeown**	(2012–2013)	Welch Foundation Research Fellow	BS Biomedical Science
11.	**Ryan P. Oakley**	(2013)	Visiting Scholar	Post Baccalaureate
12.	**Alyssa Gaynor**	(2013–2014)	Volunteer	BS Chemistry
13.	**Amanda Goldner**	(2013–2015)	Welch Foundation Research Fellow	BS Biomedical Science
14.	**Daryl Gaspar**	(2013–2015)	NSF LSAMP Research Fellow	BS Biomedical Science
15.	**Mariela Vazquez**	(2013–2015)	NSF LSAMP Research Fellow	BS Chemistry
16.	**Mikaela Nunez**	(2013–2015)	NSF LSAMP Research Fellow	BS Chemistry
17.	**Dr. Hany Nour**	(2016–2018)	TJU/1000 Talent Foreign Expert Fund	Postdoctoral Scholar
18.	**Dr. Imran Khan**	(2017–2018)	TJU/1000 Talent Foreign Expert Fund	Postdoctoral Scholar
19.	**Troy Olson**	(2017–2018)	TJU/1000 Talent Foreign Expert Fund	Visiting Scholar
20.	**Lei Kunhua**	(2017–2018)	TJU/1000 Talent Foreign Expert Fund	Visiting Scholar
21.	**Dr. Chandra Sourabh**	(2017–Present)	TJU/1000 Talent Foreign Expert Fund	Postdoctoral Scholar

GRADUATE STUDENT ADVISORY COMMITTEE SERVICE (TAMUCC/TJU)

The following students have had me as a Chair/Co-Chair/member of their graduate advisory committee:

	Names	(Dates)	Service	Degree
1.	**Hui Cui**	(2012–2014)	Chair	MS Environmental Sci.
2.	**Kevin Wolfe**	(2012–2015)	Member	PhD Marine Biology
3.	**Bruce Allen Crow**	(2012–2015)	Member	MS Biology
4.	**Zhenzhen Wang**	(2016–2018)	Chair	PhD Applied Chemistry
5.	**Zhimin Sun**	(2015–Present)	Chair	MS/PhD Pharmacy
6.	**Yan Xu**	(2015–2018)	Chair	MS Pharmacy
7.	**Lihui Xi**	(2015–Present)	Chair	MS Pharmacy
8.	**Yanhai Ni**	(2016–Present)	Chair	MS/PhD Pharmacy
9.	**Chang He**	(2016–Present)	Chair	MS Pharmacy
10.	**Zhao Zhang**	(2016–Present)	Chair	MS Pharmacy
11.	**Zhen Kai**	(2017–Present)	Chair	MS Pharmacy
12.	**Liu Qian**	(2017–Present)	Chair	MS Pharmacy
13.	**Li Jiamin**	(2017–Present)	Chair	MS Pharmacy
14.	**Miaomiao Tian**	(2018–Present)	Chair	MS Pharmacy
15.	**Jinchao Zhang**	(2018–Present)	Chair	MS Pharmacy