DR. MARK A. OLSON

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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 CC.,** Corpus Christi, TX, USA

PROFESSIONAL EXPERIENCE

Northwestern University Evanston, IL, USA
Research Associate Professor 2020–Present
Department of Chemistry

- Facilitated the management of a research program of 30+ postdoctoral research personnel
- Conducted rigorous safety evaluations of personnel working in a 7800+ sq. ft. laboratory equipped with 35 fume hoods
- Established a publication-driven research program as PI

Tianjin University Tianjin, Peoples Republic of China
National 1000 Talent Plan Professor of Chemistry 2015–2020
School of Pharmaceutical Science and Technology

- Established a publication-driven graduate research program as PI
- Aided in developing a westernized all-English 4-yr. undergraduate curriculum in pharmaceutical sci. and tech. from the ground up
- Contributed in curriculum mapping the first two years of a 4-year undergraduate degree
- Taught undergraduate and graduate level chemistry courses

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

- Established a publication-driven undergraduate research program as PI
- Taught numerous undergraduate level chemistry course
- Drafted a proposal for the establishment of a MS degree program at TAMUCC (est. fall of 2018)

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

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 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

AWARDS SERVICE & PROFESSIONAL ACTIVITIES

National/International:
China Recruitment Program of Global Experts Scholar National 1000 Talents Award
Associate Editor for Frontiers in Chemistry (Supramolecular Chemistry Area)
Advisory Board Member for Molecular Systems Design & Engineering (MSDE) RSC
Reviewer for Nature Chemistry, Chem, Angewandte Chemie, Chemistry of Materials, Chemical Communications, JACS, Soft Matter, ACS Applied Mat. and Inter., and Nanoscale
Gen. Chem. Course Awarded China National First Class Course Designation by MOE (2020)
Gen. Chem. Course Awarded Tianjin First Class Course Designation by Tianjin Govt. (2020)
Chemical Engineering Subject Chair for the RSC Twitter Conference (2018)
Materials Subject Chair for the RSC Twitter Conference (2019, 2020)
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)

Tianjin University:
Top Ten Supervisor of Tianjin University (2017)
Distinguished Youth Faculty Model for Teaching and Education of Tianjin University (2017)
Teaching & Curriculum Committee (2016-2020)
Laboratory Safety and Inspection Committee (2017-2019; Chair 2019-2020)

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)
Title V: STEM Outreach, Access, and Retention Renovation Award (2012)
Purchasing Specialist Hiring Committee (2012)
College of Science and Engineering Distinguished Speaker Committee (2012−2015)

Coastal Bend Regional Science Fair Judge (2011)
Curriculum Committee (2011−2015)
Masters in Chemistry Graduate Program Development Committee (2011−2015)
Environmental Health and Safety Committee (2011−2015)
McNair Scholars Advisory Committee (2011−2015)
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 (2010−2015)
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)

TEACHING

Texas A&M University Corpus Christi:

Organic Chemistry I	17 course sections	1054 students total
Organic Chemistry II	15 course sections	796 students total
General Chemistry I	4 course sections	392 students total
Molecular Spectroscopy	3 course sections	55 students total
Directed Independent Study	11 course sections	11 students total

Tianjin University:

General Chemistry for Pharmaceutical Science	7 course sections	534 students total
Intro to Pharmaceutical Science	5 course sections (single lecture)	489 students total
Modern Pharmaceutical Technology	2 course sections (single lecture)	114 students total

PUBLICATIONS

RESEARCHER ID: C-1083-2008
ORCID ID: 0000-0003-0398-5063
TIMES CITED: 1751 **H-INDEX:21**

1. El Malah, T.; Nour, H. F.; Radwan, E. K.; Mageid, R. E. A.; Khattab, T. A.; **Olson, M. A.** "A Bipyridinium-Based Polyhydrazone Adsorbent that Exhibits Ultrahigh Adsorption Capacity for the Anionic Azo Dye, Direct Blue 71" *Chem. Eng. J.* **2021**, *409*, 128195.

2. Nour, H. F.; El Malah, T.; Radwan, E. K.; Mageid, R. E. A.; Khattab, T. A.; **Olson, M. A.** "Main-Chain Donor-Acceptor Polyhydrazone Mediated Adsorption of an Anionic Dye from Contaminated Water" *React. Funct. Polym*. **2021**, *158*, 104795.

3. Shetty, D.; Jahovic, I.; Skorjanc, T.; Erkal, T. S.; Ali, L.; Raya, J.; Asfari, Z.; **Olson, M. A.**; Kirmizialtin, S.; Yazaydin, A. O.; Trabolsi, A. "Rapid and Efficient Removal of Perfluorooctanoic Acid from Water with Fluorine-Rich Calixarene-Based Porous Polymers" *ACS Appl. Mater. Interfaces* **2020**, *12*, 43160−43166.

4. Khan, N. A.; Zhang, R.; Wu, H.; Shen, J.; Yuan, J.; Fan, C.; Cao, L.; **Olson, M. A.**; Jiang, Z. "Solid-Vapor Interface Engineered Covalent Organic Framework Membranes for Molecular Separation" *J. Am. Chem. Soc.* **2020**, *142*, 13450−13458.

5. Khan, N. A.; Yuan, J.; Wu, H.; Huang, T.; You, X.; Rahman, A. U.; Azad, C. S.; **Olson, M. A**.; Jiang, Z. "Covalent Organic Framework Nanosheets as Reactive Fillers to Fabricate Free-Standing Polyamide Membranes for Efficient Desalination" *ACS Appl. Mater. Interfaces* **2020**, *12*, 27777−27785.

6. Sun, Z.; Xi, L.; Zheng, K.; Zhang, Z.; Baldridge, K. K.; **Olson, M. A.** "Classical and Non-Classical Melatonin Receptor Agonist-Directed Micellization of Bipyridinium-Based Supramolecular Amphiphiles in Water" *Soft Matter*. **2020**, *16*, 4788−4799.

7. Nour, H. F.; El Malah, T.; Khattab, T. A.; **Olson, M. A.** "Template-Assisted Hydrogelation of a Dynamic Covalent Polyviologen-Based Supramolecular Architecture via Donor-Acceptor Interactions" *Mater. Today Chem*. **2020**, *17*, 100289.

8. Zheng, K.; He, C.; Nour, H. F.; Zhang, Z.; Yuan, T.; Traboulsi, H.; Mazher, J.; Trabolsi, A.; Fang, L.; **Olson, M. A.** "Augmented Polyhydrazone Formation in Water by Template-Assisted Polymerization using Dual-Purpose Supramolecular Templates" *Polym. Chem.* **2020**, *11*, 1806−1819.

9. Skorjanc, T.; Shetty, D.; Gandara, F.; Ali, L.; Raya, J.; Das, G.; **Olson, M. A**.; Trabolsi, A. "Remarkably Efficient Removal of Toxic Bromate from Drinking Water with a Porphyrin-Viologen Covalent Organic Framework" *Chem. Sci*. **2020**, *11*, 845−850.

10. Das, G.; Prakasam, T.; Addicoat, M. A.; Sharma, S. K.; Ravaux, F.; Mathew, R.; Baias, M.; Jagannathan, R.; **Olson, M. A.**; Trabolsi, A. "Azobenzene-Equipped Covalent Organic Framework: Light Operated Reservoir" *J. Am. Chem. Soc.* **2019**, *141*, 19078−19087.

11. Ni, Y.; Sun, Z.; Wang, Y.; Nour, H. F.; Sue, A. C.-H.; Finney, N. S.; Baldridge, K. K.; **Olson, M. A.**, "Versatile Hydrochromic Fluorescent Materials Based on a 1,8-Naphthalimide Integrated Fluorophore-Receptor System" *J. Mater. Chem. C.* **2019**, *7*, 7399−7410.

12. Zhang, Z.; Liu, Q.; Zun, Z.; Phillips, B. K.; Wang, Z.; Al-Hashimi, M.; Fang. L.; **Olson, M. A.**, "Poly-Lipoic Ester-Based Coacervates for the Efficient Removal of Organic Pollutants from Water and Increased Point-of-Use Versatility" *Chem. Mater*. **2019**, *31*, 4405−4417.

13. Shetty, D.; Skorjanc, T.; **Olson, M. A.**; Trabolsi, "Self-assembly of Stimuli-Responsive Imine-linked Calix[4]arene Nanocapsules for Targeted Camptothecin Delivery" *Chem. Commun.*, **2019**, *55*, 8876−8879.

14. Das, G.; Nagaraja, S.; Sridurai, V.; Shinde, D. B.; Addicoat, M.; Prakasam, T.; Gandara, F.; Ravaux, F.; Sharma, S. K.; Nair, G. G.; Lai, Z.; Jagannathan, R.; **Olson, M. A.**; Trabolsi, A., "Redox-Triggered Buoyancy and Size Modulation of a Dynamic Covalent Gel" *Chem. Mater*. **2019**, *11*, 4148−4155.

15. Skorjanc, T.; Shetty, D.; **Olson, M. A.**; Trabolsi, A., "Design Strategies and Redox-Dependent Applications of Insoluble Viologen-Based Covalent Organic Polymers" *ACS Appl. Mater. & Interfaces.* **2019**, *7*, 6705−6716.

16. 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*. **2019**, 9, 1907−1914.

17. 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.

18. 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)**

19. 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**

20. 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.

21. 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.

22. 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**

23. 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.

24. 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.

25. 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.**

26. **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**

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

28. **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.**

29. 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.

30. 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.

31. 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.

32. 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.

33. 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.

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

35. 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.

36. 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.

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

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

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

40. 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.

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

42. 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.

43. **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.

44. **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.**

45. 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.

46. 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.

47. 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.

48. 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.

ACADEMIC LECTURES / PRESENTATIONS

1. Olson, M.A. "Charge Transfer-Dependent Applications of Pyridinium-Based Soft Matter Assembled in Water" **Chemistry Seminar Series, King Abdullah University of Science and Technology (KAUST), Thuwal, Kingdom of Saudi Arabia**, Sept. 2020. INVITED

2. Olson, M. A. "Supramolecular Soft Matter Material Science – Developing Supramolecular Functional Materials" **Stoddart Alumni Symposium, Northwestern University, Evanston, Illinois**, Aug. 2020. INVITED

3. 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

4. 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

5. 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

6. 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

7. 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

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

9. 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

10. 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

11. 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.

12. 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

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

14. 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

15. 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

16. 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.

17. 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

18. 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

19. 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

20. 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

21. 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

22. 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

23. 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

24. 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

25. 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

26. 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.

27. 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.

28. 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

29. 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.

30. 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.

31. **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.

32. **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.

33. **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.

FUNDING/GRANTS FUNDED

1. **Olson, M. A.** "Self-Sorted Helical Handedness of a Versatile Class of Supramolecular Self-Assemblies and Polymers for Applications in Membrane Dialysis Fabrication and Chiral Separations" Sponsored by the National Science Foundation of China (NSFC), 400,000 RMB ($58,681.14 USD). (2020-2022)

2. 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)

3. **Olson, M. A.** "Adsorption and Separation of Organic Pollutants in Water by New Polymer-Based Nanomolecular Materials" Sponsored by TJUs Independent Innovation Fund, 30,000 RMB ($4,285 USD). (2017–2018)

4. Du, Y.; **Olson, M. A**. "The Development of Functionalized Self-Assembling Nanomaterials" Sponsored by TJUs Independent Innovation Fund, 30,000 RMB ($4,285 USD). (2017–2018)

5. **Olson, M. A.** "National Young 1000 Talent Plan Award" China State Administration of Foreign Expert Affairs (SAFEA), 2,000,000 RMB ($285,714.00). (2015–current)

6. **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)

7. **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)

8. 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)

9. 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)

10. **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, POLYMERS, AND MATERIAL SCIENCE: 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 • hydrochromics • photochromics • switchable inks and dyes • molecular adsorbents

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RESEARCH PERSONNEL / ASSISTANTS MENTORED (TAMUCC/TJU)

The following research personnel (non-graduate students) 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	High School Student
8.	**Josh Wondra**	(2012)	Welch Foundation Research Fellow	BS Biology
9.	**Shaun P. McKeown**	(2012–2013)	Welch Foundation Research Fellow	BS Biomedical Science
10.	**Ryan P. Oakley**	(2013)	Visiting Scholar	Post Baccalaureate
11.	**Alyssa Gaynor**	(2013–2014)	Volunteer	BS Chemistry
12.	**Amanda Goldner**	(2013–2015)	Welch Foundation Research Fellow	BS Biomedical Science
13.	**Daryl Gaspar**	(2013–2015)	NSF LSAMP Research Fellow	BS Biomedical Science
14.	**Mariela Vazquez**	(2013–2015)	NSF LSAMP Research Fellow	BS Chemistry
15.	**Mikaela Nunez**	(2013–2015)	NSF LSAMP Research Fellow	BS Chemistry
16.	**Dr. Hany Nour**	(2016–2018)	TJU/1000 Talent Foreign Expert Fund	Postdoctoral Scholar
17.	**Dr. Imran Khan**	(2017–2018)	TJU/1000 Talent Foreign Expert Fund	Postdoctoral Scholar
18.	**Troy Olson**	(2017–2018)	TJU/1000 Talent Foreign Expert Fund	Visiting Scholar
19.	**Lei Kunhua**	(2017–2018)	TJU/1000 Talent Foreign Expert Fund	Visiting Scholar
20.	**Dr. Chandra Sourabh**	(2017–Present)	TJU/1000 Talent Foreign Expert Fund	Postdoctoral Scholar

GRADUATE STUDENTS MENTORED AND ADVISORY COMMITTEE SERVICE (TAMUCC/TJU)

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

	Names	(Dates)	Service	Degree
1.	**Hui Cui**	(2012–2014)	PI/Chair	MS Environmental Science
2.	**Kevin Wolfe**	(2012–2015)	Member	PhD Marine Biology
3.	**Bruce Allen Crow**	(2012–2015)	Member	MS Biology
4.	**Zhenzhen Wang**	(2016–2018)	PI/Chair	PhD Applied Chemistry
5.	**Zhimin Sun**	(2015–Present)	PI/Chair	MS/PhD/Applied Chemistry
6.	**Yan Xu**	(2015–2018)	PI/Chair	MS Pharmacy
7.	**Lihui Xi**	(2015–2019)	PI/Chair	MS Pharmacy
8.	**Yanhai Ni**	(2016–Present)	PI/Chair	MS/PhD/Applied Chemistry
9.	**Chang He**	(2016–2019)	PI/Chair	MS Pharmacy
10.	**Zhao Zhang**	(2016–2019)	PI/Chair	MS Pharmacy
11.	**Zhen Kai**	(2017–2020)	PI/Chair	MS Pharmacy
12.	**Liu Qian**	(2017–2020)	PI/Chair	MS Pharmacy
13.	**Li Jiamin**	(2017–2020)	PI/Chair	MS Pharmacy
14.	**Miaomiao Tian**	(2018–Present)	PI/Chair	MS Pharmacy
15.	**Shannelle Habikanova**	(2019–Present)	PI/Chair	PhD/Applied Chemistry
16.	**Han Yishan**	(2019–Present)	PI/Chair	MS Pharmacy
17.	**Di Haiting**	(2019–Present)	PI/Chair	MS Pharmacy