

Committee on Energy and Commerce
U.S. House of Representatives
 Witness Disclosure Requirement - "Truth in Testimony"
 Required by House Rule XI, Clause 2(g)(5)

1. Your Name: James M. Tour		
2. Your Title: T. T. and W. F. Chao Professor of Chemistry		
3. The Entity(ies) You are Representing: William Marsh Rice University		
4. Are you testifying on behalf of the Federal, or a State or local government entity?	Yes	No X

Please list any Federal grants or contracts, or contracts or payments originating with a foreign government, that you or the entity(ies) you represent have received on or after January 1, 2015. Only grants, contracts, or payments related to the subject matter of the hearing must be listed.

Funding Agency: Air Force Office of Scientific Research
Title of the project: Marriage of Top-Down Lithography to Bottom-Up Chemistry Edge Control in Graphene Nanoribbons
Goals, specific aims/tasks: to design and develop methods to control the edge configuration of graphene nanoribbons.
Estimated start date and end date: 8/1/14 – 7/31/19
Total Award Amount: \$825,000

Funding Agency: MURI through Air Force Office of Scientific Research
Title of the project: Synthesis and Characterization of 3D Carbon Nanotube Solid Networks
Goals, specific aims/tasks: the design and synthesis of 3D carbon nanotube networks including the synthesis of graphene-carbon nanotube hybrids.
Estimated start date and end date: 11/30/11 – 3/31/17
Total Award Amount: \$661,666

Funding Agency: NIH through the Baylor College of Medicine
Title of the project: Novel Carbon Nanoparticle Superoxide Dismutation Pathways
PI: Thomas Kent, BCM
Goals, specific aims/tasks: to design and synthesize novel carbon nanoparticles to ascertain superoxide dismutation pathways.
Estimated start date and end date: 9/1/15 – 8/31/19
Total Award Amount: \$540,592

Funding Agency: National Science Foundation

Title of the project: ERC: Nanotechnology Enabled Water Treatment Systems (NEWT)

PI: Pedro Alvarez, Rice

Goals, specific aims/tasks: to design and synthesize nanomaterials for use in water treatment

Estimated start date and end date: 9/1/15 – 8/31/20

Total Award Amount: \$101,425

Funding Agency: Subsea Systems Institute (University of Houston through Deepwater Horizon settlement)

Title of the project: Remote High Power for Subsea Emergencies

PI: James M. Tour

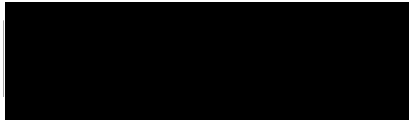
Goals, specific aims/tasks: to design batteries and supercapacitors that can power emergency equipment underwater

Estimated start date and end date: 5/3/2016 – 8/31/2017

Total Award Amount: \$75,000

5. Please attach your curriculum vitae to your completed disclosure form.

Signature:

A solid black rectangular box redacting the signature of the individual.

Date: 11 March 2017

James M. Tour, PhD

Professional Preparation

Syracuse University, Syracuse, NY; Chemistry BS, 1981

Purdue University, West Lafayette, IN; Organic Chemistry, Ph.D., 1986

University of Wisconsin, Madison, WI, Organometallic Chemistry, Postdoc, 1986-1987

Stanford University, Stanford, CA, Organic Chemistry, NIH Postdoc, 1987-1988

Appointments

- 1999 - present T. T. and W. F. Chao Professor of Chemistry
Professor, Department of Materials Science and NanoEngineering,
Department of Computer Science, Chemistry Department and NanoCarbon
Center, Rice University, Houston, TX
- 2005 - 2007 Director, Carbon Nanotechnology Laboratory, Rice University, Houston, TX
- 1996 - 1999 Guy F. Lipscomb Professor of Chemistry, Department of Chemistry and
Biochemistry, University of South Carolina, Columbia, SC
- 1994 - 1996 Professor, Department of Chemistry and Biochemistry, University of South
Carolina, Columbia, SC
- Fall 1994 Visiting Scholar (sabbatical), Department of Chemistry, Harvard University,
Cambridge, MA
- 1992 - 1994 Associate Professor, Department of Chemistry and Biochemistry, University
of South Carolina, Columbia, SC
- 1988 - 1992 Assistant Professor, Department Chemistry, University of South Carolina,
Columbia, SC

Publications (10 of 625)

1. Kim ND, Li Y, Wang G, Fan X, Jiang J, Li L, Ji Y, Ruan G, Hauge RH, and Tour JM. (2016). Growth and transfer of seamless 3D graphene-nanotube hybrids, *Nano Letters* 16, 1287–1292. <http://dx.doi.org/10.1021/acs.nanolett.5b04627>
2. Li L, Zhang J, Peng Z, Li Y, Gao C, Ji Y, Ye R, Kim ND, Zhong Q, Yang Y, Fei H, Ruan G, and Tour JM. (2016). High-performance pseudocapacitive microsupercapacitors from laser-induced graphene, *Advanced Materials* 28, 838–845. <http://dx.doi.org/10.1002/adma.201503333>
3. Gao C, Li L, Raji A-RO, Kovalchuk A, Peng Z, Fei H, He Y, Kim ND, Zhong Q, Xie E, and Tour JM. (2015). Tin disulfide nanoplates on graphene nanoribbons for full lithium ion batteries, *ACS Applied Materials and Interfaces* 7, 26549–26556. <http://dx.doi.org/10.1021/acsami.5b07768>
4. Fei H, Dong J, Arellano-Jiménez MJ, Ye G, Dong Kim N, Samuel ELG, Peng Z, Zhu Z, Qin F, Bao J, Yacaman MJ, Ajayan PM, Chen D, and Tour JM. (2015). Atomic cobalt on nitrogen-doped graphene for hydrogen generation, *Nature Communications* 6, 8668. <http://dx.doi.org/10.1038/ncomms9668>

5. Zhu Y, Li L, Zhang C, Casillas G, Sun Z, Yan Z, Ruan G, Peng Z, Raji A-RO, Kittrell C, Hauge RH, and Tour JM. (2012). A seamless three-dimensional carbon nanotube graphene hybrid material, *Nature Communications* 3, 1225. <http://dx.doi.org/10.1038/ncomms2234>
6. García-López V, Chiang P-T, Chen F, Ruan G, Martí AA, Kolomeisky AB, Wang G, and Tour JM. (2015). Unimolecular submersible nanomachines, synthesis, actuation, and monitoring, *Nano Letters* 15, 8229–8239. <http://dx.doi.org/10.1021/acs.nanolett.5b03764>
7. Ye R, Xiang C, Lin J, Peng Z, Huang K, Yan Z, Cook NP, Samuel ELG, Hwang C-C, Ruan G, Ceriotti G, Raji A-RO, Martí AA, and Tour JM. (2013). Coal as an abundant source of graphene quantum dots, *Nature Communications* 4, 2943. <http://dx.doi.org/10.1038/ncomms3943>
8. Kim C, Sikkema WKA, Hwang I, Oh H, Kim, UJ, Lee BH, Tour JM. Spinal Cord Fusion with PEG-GNRs (TexasPEG): Neurophysiological Recovery in 24 Hours in Rats. (2016). *Surg. Neurol. Int.* 7, S632-S636. <http://dx.doi.org/10.4103/2152-7806.190475>
9. Lin J, Peng Z, Liu Y, Ruiz-Zepeda F, Ye R, Samuel ELG, Yacaman MJ, Yakobson BI, and Tour JM. (2015). Laser-induced porous graphene films from commercial polymers, *Nature Communications* 5, 5714. <http://dx.doi.org/10.1038/ncomms6714>
10. Li L, Kovalchuk A, Fei H, Peng Z, Li Y, Kim ND, Xiang C, Yang Y, Ruan G, and Tour JM. (2015). Enhanced cycling stability of lithium ion batteries using graphene-wrapped Fe₃O₄-graphene nanoribbons as anode materials, *Advanced Energy Materials* 5, 1500161-6. <http://dx.doi.org/10.1002/aenm.201500171>

Synergistic Activities (5)

- 625 publications, 130 patents, H-index = 123, total citations > 69,000 (Google Scholar)
- Tour was inducted into the National Academy of Inventors in 2015
- Tour was named among “The 50 Most Influential Scientists in the World Today” by **TheBestSchools.org** in 2014
- Tour was named “Scientist of the Year” by *R&D Magazine*, 2013
- One of the Top 10 chemists in the world over the past decade, by a Thomson Reuters citations per publication index survey, 2009