

CHARIKLIA SOTIRIOU-LEVENTIS

Department of Chemistry, Missouri University of Science and Technology (MS&T),
Formerly, University of Missouri-Rolla (UMR)
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EDUCATION

- Postdoctoral** *Physical Organic Chemistry*; June 1989-March 1992.
Harvard University, Cambridge, Massachusetts, U.S.A.
Research Advisor: Professor William von Eggers Doering (*deceased*).
- Postdoctoral** *Medicinal Chemistry*; Nov. 1987-May 1989.
Northeastern University, Boston, Massachusetts, U.S.A.
Research Advisor: Professor Roger W. Giese.
- Ph.D.** *Organic Chemistry*; December 1987.
Michigan State University, East Lansing, Michigan, U.S.A.
Thesis Preceptor: Professor C. K. Chang.
Dissertation Title: "Synthesis and Properties of Heme *d*-, *d*₁- and Sulfur
Containing Green Hemes."
- B.S.** *Chemistry* (valedictorian); June 1982.
University of Athens, Athens, Greece.

HONORS & AWARDS

- 2022-present: EBM of a new journal: *Discover Materials* by Springer Nature.
- 2021: Research featured on the cover of *Soft Matter* **2021**, *17*(17), 4496-4503.
- 2022-2023: Wilbur Tappmeyer Outstanding Teaching Award, Chemistry Department, MS&T.
- 2019-2020: Outstanding Teaching Award, Missouri S&T.
- 2018-2019: Wilbur Tappmeyer Outstanding Teaching Award, Chemistry Department, MS&T.
- 2016-2017: Wilbur Tappmeyer Outstanding Teaching Award, Chemistry Department, MS&T.
- 2015-2016: Wilbur Tappmeyer Outstanding Teaching Award, Chemistry Department, MS&T.
- 2012-2013: Excellence in Teaching Graduate-Level Chemistry Award, MS&T.
- 2010-2011: Excellence in Teaching Graduate-Level Chemistry Award, MS&T.
- 2009-2010: Wilbur Tappmeyer Excellence in Undergraduate Teaching Award, Chemistry
Department, MS&T.
- 2008-2009: Excellence in Teaching Graduate-Level Chemistry Award, MS&T.
- 2007-2008: Wilbur Tappmeyer Outstanding Teaching Award, Chemistry Department, MS&T.
- 2005-2006: Excellence in Teaching Graduate-Level Chemistry Award, UMR.
- 2004: Appeared in the list of the most influential Professors of UMR by UMR Alumni.
- 2002: Co-inventor of Crossed-linked Aerogels (X-Aerogels)
- 2001-2002: Outstanding Teaching Award, UMR.
- 2001-present: Head of the Organic Chemistry Division, MS&T.
- 2002-present: Included in Marquis Who's Who in Science and Engineering.
- 2000-present: Included in Marquis Who's Who of American Women.
- 2000-2001: President of the South Central Missouri Local Section of ACS.

1999-2000: Wilbur Tappmeyer Outstanding Teaching Award, Chemistry Department, UMR.
1996-1997: Outstanding Teaching Award, UMR.
1997: Included in Outstanding Young Women of America.
1997-present: Included in American Men & Women of Science.
1993: Award in Organic Synthesis, Ciba Corning Diagnostics Inc.
1988: Gustel Giessen Advanced Research Award of the Barnett Institute of Chemical Analysis and Materials Science.
1986-1987: SOHIO Graduate Fellowship.
1985-1986: Merit Level Teaching Assistant, Chemistry Dept., Michigan State University.
1978-1982: Greek Institute of State Scholarship Awards.

EMPLOYMENT HISTORY

*Missouri University of Science & Technology (formerly, UMR), Department of Chemistry
Rolla, MO 65409, U.S.A.*

July 2022 - present: Professor and Chair of Chemistry Department
September 2005-June 2022: Professor and Doctoral Faculty Member
September 2001-August 2004: Associate Professor and Doctoral Faculty Member
September 1995-August 2001: Assistant Professor and Doctoral Faculty Member
January 1994-August 1995: Adjunct Assistant Professor

Teaching

My teaching includes undergraduate and graduate level courses in Organic Chemistry and in the past, General Chemistry. Courses taught: Chem 1310 (General Chemistry I), Chem 2210&2220 (Organic Chemistry I&II), Chem 4297 (Organic Synthesis and Spectroscopic Analysis), Chem 6220 (Advanced Synthetic Organic Chemistry), Chem 6240 (Physical Organic Chemistry). I had also prepared lab manuals, and instructed both introductory and advanced undergraduate organic chemistry laboratory courses (Chem 2219, 2229, 4297).

Teaching evaluations resulted in 14 teaching awards from Missouri S&T.

Research (h-index: 45)

My research spans from physical organic chemistry, supramolecular chemistry to nanotechnology, synthesis of new organic materials including aerogels with applications as drug delivery systems, sensors, catalyst supports, gas adsorbers, biomimetics (shape memory materials), thermites, and more recently carbon aerogels for CO₂ capture. My research projects over the years have been funded from NIH, NSF, PRF, NASA, ARO, DOE, SBIR-Navy and industry. Research projects past and current are briefly described below:

- (a) As part of an effort to find efficient radical traps, and consequently anticarcinogenic agents, we have investigated the reaction of electrochemically generated radicals, such as superoxide and hydroperoxyl radicals with biomolecules such as vitamin A and β -carotene (as a mixture of geometrical isomers). We have also compared the rate constants of the various mono-cis isomers of β -carotene with superoxide, generated via pulse radiolysis (NIH: \$200K).
- (b) Synthesis and study of the redox chemistry of a wide range of compounds based on the 4-benzoyl-*N*-methylpyridinium cation. This project has led into establishing that class of compounds as viable electrochromic materials, and as redox mediators (i.e., catalysts) for sensors and biocatalysts. At a more fundamental level, this project has led into studies of charge percolation in dendritic systems and optical oxygen sensors with the highest dynamic range and sensitivity ever reported. Along the way, we also measured and established the sigma substituent constant (a fundamental thermodynamic quantity) of the one-electron reduced form of the nitro group, a

discovery with far reaching implications with regards to using that group in organic synthesis (PRF: \$60K).

(c) Synthesis and study of new arylethynyl substituted anthraquinones, Os(II) complexes, and substituted phenothiazinium cations as part of an effort to shift photoluminescence in the near-IR. (NASA: \$300K).

(d) Supramolecular chemistry related to shifting the keto-to-*gem* diol equilibrium to the keto form by intercalation in curcurbit[7 or 8]uril hosts.

(e) Since 2002, in collaboration with now retired Curators' Professor Nicholas Leventis, we have launched an extremely successful project on polymer crosslinked aerogels, namely X-aerogels (ARO: \$2.0 M, 3 grants since 2010; NSF: \$1.265 M, total of 6 grants), BASF (\$211K), and DOE (\$265K). We were able to resolve the fragility problem associated with this lightweight class of materials by developing crosslinking chemistry that increased the strength of silica aerogels by a factor of over 300 for a nominal increase in density by a factor of 3. We have also developed synthetic methodology for the preparation of a plethora of organic aerogels. Several patents resulted from these new aerogels. This research has attracted national and international attention: *C&E News* (09/16/2002), *BusinessWeek* (10/14/2002), *Today's Chemist at Work* (Nov. 2002), *Materials Today* (Nov. 2002), *American Way Magazine* (Jan. 2005), *Chemical Science (Chem. Sci.* **2008**, 5, C35), *Nature* (2009) and many other publications in several languages). The new aerogel nanocomposites have shown a myriad of applications ranging from catalyst supports, drug delivery systems, biomimetics to armor vests, insulated windows, automobile bumpers, gas adsorbers, thermites, etc.

Ciba Corning Diagnostics Inc.

E. Walpole, MA, U.S.A.

February 1993-November 1993: Senior Research Scientist. Design and synthesis of peptides containing multiple chemiluminescent labels for conjugation with oligonucleotides. These modified oligonucleotide probes provide increased detection sensitivity for the targeted DNA and RNA sequences, and are important for the diagnosis of infectious diseases and genetic disorders.

March 1992-February 1993: Research Scientist. Design and synthesis of (a) chemiluminescent labels based on acridinium esters, and (b) the corresponding tracers, for use in clinical immunodiagnosics.

Harvard University, Department of Chemistry

Cambridge, MA, U.S.A.

June 1989-March 1992: Synthetic and mechanistic chemistry of linear polyenes; measurement of the activation parameters of the thermal *cis-trans* isomerization of β -carotenes as probes of their biological activity.

Northeastern University, Department of Medicinal Chemistry

Boston, MA, U.S.A.

November 1987 to May 1989: Methodology development for the quantitative transformation of carcinogen-DNA adducts to aromatic esters, suitable for trace analysis by GC/MS. Along these lines, discovered a highly efficient reaction of potassium superoxide for the synthesis of aromatic 1,2-dicarboxylic acids.

*Michigan State University, Department of Chemistry
E. Lansing, MI, U.S.A.*

Research

1982-1987: Synthesis and properties of porphyrins, reduced porphyrins (chlorins), other porphyrinoids and their metal complexes; total synthesis of 'Lactochlorin', the heme *d* prosthetic group of bacterial terminal oxidases.

Teaching

1982-1986: Recitation and laboratory instructor in organic chemistry (merit level).

*University of Athens, Department of Chemistry
Athens, Greece*

1981-1982: Preparation of protecting groups for use in peptide synthesis.

PROFESSIONAL AFFILIATIONS

American Chemical Society

American Association for the Advancement of Science

UNIVERSITY SERVICE & OUTREACH ACTIVITIES

Faculty Senate (2023-present)

Campus VCRI Search Committee (2022, member)

Campus Promotion & Tenure Committee (2016-18, 2019-20 member, 2020-2022 alternate)

Campus Promotion & Tenure Policy Committee (2017-2020)

Chemistry Department's Undergraduate Affairs Committee (2009-10, 2012-13, 2014-15, 2017-present)

Chemistry Department's Graduate Recruiting Committee (2015-16)

Head of the Organic Chemistry Division (2001-present)

Student Conduct Committee (2012-13, appointed by the Chancellor)

Chemistry Department's Strategic Planning Committee (2013-14)

Chemistry Department's Biochem. Search Committee Chair (2013-14)

Chemistry Department's Graduate Affairs Committee (2008-09, 2013-14, 2016-17)

MS&T Undergraduate Research Day Judge (April 6, 2011)

Personnel Committee, MS&T Campus (2007, 2008-10 Chair)

MS&T Rules, Procedure & Agenda Campus Committee (2008-10)

Faculty Senate SB389 Ad-Hoc Committee

Chemistry Department's Promotion & Tenure Committee (2008-present, 2020 and 2022, Chair)

Chemistry Department's Undergraduate Affairs & Scholarship Committee (2008-09, 2014-15, 2017-18)

Chemistry Department's Vitek Chair Search Committee (2006).

ACS Chair of the South Central Missouri Local Section of the American Chemical Society (2000-2001).

Chair of Physical Organic Chemistry Session, 35th Midwest Regional ACS Meeting, St. Louis, MO, Oct. 26, 2000.

UMR's Pre-Medical Advisory Committee (2000-2003).

Chemistry Department's Faculty Search Committee (2000, 2004-05).
College of A&S Student Academic Affairs Committee (1996-98).
Chemistry Department's Personnel Committee (1997-98, 2008-09, 2001-12, 2012-13 chair, 2016-18).
Chemistry Department's NMR Spectroscopist Search Committee (1997-98, 2002-03, 2015-16, 2016-17, 2019-2020, Chair).
Central Midwest Region Chemical Education Advisory Committee "CEAC" (1997-).
Chemistry Department's Graduate Brochure Revision Committee (1998).
Participated in organizing the National Chemistry Week (November 1-7, 1998).

ADVISEES

Undergraduate Students

Past

Christina M. Collins (B.S., 1999 from UMR; Ph.D., 2005 from MIT, currently at Bayer).
Kimberly R. Gaston (B.S., 2001).
Travis Overschmidt (B.S. 2001).
Rebecca Rich (B.S., 2003).
Krista May (B.S., 2003).
Norman Horn (B.S., 2005, OURE, 2002-2003).
Selin Acar (B.S., 2011, OURE, 2009-2010)
Brice Curtin (B.S., 2011, OURE, 2009-2010 and 2010-2011; Ph.D. from UCLA, currently postdoc at MIT)
Clayton Buback (OURE, 2011-2012 and OURE Fellow, 2012-2013, currently MD, Rochester, NY)
Patrick McCarver (OURE, 2011-2012 and OURE Fellow, 2012-2013)
Ashley Gerald (2012)
Zachary Garr (OURE, 2013-2014, 2014-2015 and 2015-2016; ACS Division of Organic Chemistry Award (2016), currently a graduate student at University of Minnesota-Twin Cities).
Connor Kabes (B.S. with thesis, 2017, OURE, 2015-2016 and 2016-2017, ACS Division of Organic Chemistry Award (2017) currently a graduate student at Texas A&M)
Daniel Greenan (OURE, 2019-2021); third place for the Science Oral session, Missouri S&T 16th Annual Undergraduate Research Conference, April 27, 2021, currently a graduate student at UIUC.
Joseph Gloriod (UGRA, 2021-2022); first place for the Science Oral session, Missouri S&T 17th Annual Undergraduate Research Conference, April 14, 2022.

Present

Samuel Hackett (FYRE, SP2022); second place for the Science Oral session, Missouri S&T 17th Annual Undergraduate Research Conference, April 14, 2022. He received the South-Central Missouri Local Section of the American Chemical Society "Excellence in Undergraduate Research Scholarship" Award in 2023.

Kamden George (FYRE, SP2023); FYRE Poster, Havener Center, May 3, 2023; OURE (FS2023-SP2024). Placed 1st in the individual sciences poster competition at S&T's 19th Annual Undergraduate Research Conference, April 10, 2024.

Graduate Students (Thesis Major Advisor or Co-Advisor)/Postdocs

Past

Zhan Mao (M.S., 2000, advisor)
Penggao Duan (M.S., 2003, advisor, currently at Bruker)
Abdel-Monem M. Rawashdeh (Ph.D., 2003, advisor, visiting scholar, summer, 2007, currently, Professor at Yarmouk University, Jordan)
Guohui Zhang (Ph.D., 2004, advisor, currently research scientist, Dept. Biomedical Engineering, Washington University, St. Louis, MO)
Jinhua Yang (Ph.D., 2004, advisor)
Xiaojiang Wang (M.S., 2006, advisor)
Amala Dass (postdoc, 2005-06, advisor, currently Professor, Chemistry Dept., University of Mississippi, Oxford, MS)
Sudhir Mulik (Ph.D., 2008, advisor, currently at Dow Chemical Company)
Arumugam Thangavel (Ph.D., 2010, advisor, currently Associate Professor, Chemistry Dept., CSU)
Anand Sadekar (Ph.D., 2011, advisor, currently at INTEL)
Naveen Chandrasekaran (Ph.D., 2011, co-advisor, currently at Central Electrochemical Research Institute, New Delhi, India)
Dhairiyashil Mohite (Ph.D., 2012, co-advisor, currently at INTEL)
Chakkaravarthy Chidambareswarapattar (Ph.D., 2013, co-advisor, currently at INTEL)
Shruti Mahadik-Khanolkar (Ph.D., 2013, co-advisor, currently at INTEL)
Clarissa Wisner (Ph.D., 2013, co-advisor, electron microscope specialist at MS&T)
Abhishek Bang (Ph.D., 2014, advisor, currently at INTEL)
Malik A. Saeed (Ph.D., 2016, co-advisor, currently at INTEL)
Suraj Donthula (Ph.D., 2018, co-advisor, currently at INTEL)
Hojat Majedi Far (Ph.D., 2018, advisor, currently at Blueshift)
Saidulu Gorla (postdoc, co-advisor, 2018-19)
Parwani Rewatkar (Ph.D., 2019, advisor, currently at INTEL)
Tehereh Taghvaei Yazdeli (Ph.D., 2019, co-advisor, currently postdoc at UPenn)
Chandana Mandal (Ph.D., 2019, co-advisor, currently at INTEL)
Rushi U. Soni (Ph.D., 2021, advisor, currently at Aspen Aerogels Inc.)
ABM Shaheen Doulah (Ph.D., 2023, advisor, currently at Evonik, Trexlertown, PA)
Vaibhav Edlabadkar (Ph.D., 2023, advisor, currently at Jacam Catalyst, Midland Texas)

Present

Stephen Owusu Yaw (Ph.D. candidate)
Emmanuel Darkwah (Ph.D. candidate)
Raheemat Rafiu (Ph.D. candidate)
Bharath Gade Reddy (M.S. candidate)

GRANTS (Since 2007)

Awarded:

“Collaborative Research: Synthesis, Characterization, Modelling and Simulation of Polymer Nanoencapsulated Aerogels”

PI: N. Leventis (40%), C. Sotiriou-Leventis (30%), K. Woelk (30%)

Amount: \$149,970

Agency: National Science Foundation (Mechanics and Structure of Matter Program)

Type: Research Grant. Period: June 1, 2007 – May 31, 2010

“Strategies Towards One-Pot Synthesis of 3D Core-Shell Superstructures Classified as Mechanically Strong Aerogels”

PIs: N. Leventis (70%), C. Sotiriou-Leventis (30%)

Amount: \$364,000

Agency: NSF (Inorganic Chemistry/Bioinorganic/Supramolecular/Main Group/Materials)

Type: Research Grant. Period: July 1, 2008 – June 30, 2011

“Advanced Polymer Systems for Defense Applications: Power Generation, Protection, and Sensing”

PI: N. Leventis, Co-PIs: Chariklia Sotiriou-Leventis, Jeffrey Winiarz

Subcontractors: UMKC, OSU, VCU

Amount: \$2,436,889 (MS&T: \$1,602,311)

Agency: Army Research Office, Polymer Chemistry Division

Type: FY2010 Dept. of Defense Appropriations Bill. Period: August 1, 2010-Sept. 15, 2013

“Evaluation of Aerogels in an Advanced Combat Helmet for Head Protection under Shock Wave or Blunt Impact”

PIs: N. Leventis (50%), C. Sotiriou-Leventis (50%)

Amount: \$181,000 (MS&T: \$54,080)

Agency: US Army through subcontract from U. of Texas - Dallas

Type: Cooperative Agreement. Period: June 1, 2014 – May 31, 2015

“Fractal Assembly of Polymeric Nanoparticles into Fibers-vs-Globules: An Experimental and Computational Study”

PIs: C. Sotiriou-Leventis (50%), N. Leventis (50%)

Amount: \$360,000

Agency: Army Research Office, Polymer Chemistry Division

Type: Research Grant. Period: August 1, 2014 – July 31, 2018

“SNM: Low-Cost, Large-Scale Nanomanufacturing of Inorganic, Polymeric and Composite Aerogels”

PIs: C. Sotiriou-Leventis (50%, 100% since 6/1/19), N. Leventis (50%, until 5/31/19)

Amount: \$1,551,974 (MS&T: \$410,273)

Agency: NSF Through Subcontract from Tufts University

Type: Subcontract. Period: January 1, 2016 – June 30, 2022

“SBIR: Innovative Manufacturing/Materials for Structural Insulators in Hypersonic Flight Body Thermal Protection Systems”

PI: C. Sotiriou-Leventis (100%)
Amount: \$25,000 (initial phase; target second phase in January 2023 with ~\$200K funding)
Agency: Luna Innovations Inc.
Type: Research Grant. Period: October 20, 2021 – December 31, 2022.

“Evaluation of the Mechanism for CO₂ Adsorption of Selected Aerogels Provided by Aspen Aerogels”

PI: C. Sotiriou-Leventis (100%)
Amount: \$36,133
Agency: Aspen Aerogels Inc.
Type: Research Grant. Period: September 1, 2021 – May 31, 2023.

“Evaluation of the Mechanism for CO₂ Adsorption of Selected Aerogels Provided by Aspen Aerogels”

PI: C. Sotiriou-Leventis (100%), Missouri S&T
Amount: \$29,160 (additional award)
Agency: Aspen Aerogels Inc.
Type: Research Grant. Period: November 1, 2021 – May 31, 2023.

“Inclusive culture towards faculty success”

PIs: C. Sotiriou-Leventis, S. Minter, R. Wang
Award Amount: \$10,000
Source: S&T ADVANCE
Funding Period: 01/15/2024 – 01/14/2025

“Forging a rural alliance for building a sustainable society through materials innovation”

Co-PIs: C. Sotiriou-Leventis, M. Nath, P. Stavropoulos, A. Choudhury, PI: S. Minter
Award: \$35,000
Source: S&T, IGI
Funding Period: 04/1/2024-12/31/2024

“Designing Self-Decontaminating Fibers and Fabrics: Toxicity Mitigation of Organophosphate-Based Pesticides and Nerve Agents”

PIs: V. P. Reddy (9/30/22-4/18/24) and C. Sotiriou-Leventis (4/18/24-12/31/26)
Award: \$500,000
Source: Army Research Office
Funding Period: 9/30/22 - 12/31/26

Pending:

“MRI: Track 1 Acquisition of a Single-Crystal X-Ray Diffractometer to enable interdisciplinary research in Chemistry, Physics, Materials and Geosciences”

Co-PI: C. Sotiriou-Leventis (15%), Missouri S&T
Agency: NSF-MRI
Total Funds requested: \$436,269
Period: 06/01/2024 – 05/30/2026.

PUBLICATIONS

147. Sundaramoorthy, S.; Soni, R.; Owusu, S. Y.; Bhattacharya, S.; ud Doulah, ABM S.; Edlabadkar, V.; Sotiriou-Leventis, C.; Choudhury, A. "High-capacity Anode for Sodium-ion Batteries Using Hard Carbons Derived from Polyurea-crosslinked Silica Xerogel Powders" *ACS Appl. Energy Mater.* **2024**, accepted.
146. Owusu, S. Y.; ud Doulah, ABM S.; Edlabadkar, V. A.; George, K. J.; Sotiriou-Leventis, C. "The Effect of Nanomorphology as Quantified via the K-index on the Drug Delivery Properties of Isocyanate-Derived Aerogels," *ACS Appl. Polym. Mater.* **2024**, *6*(17), 10655-10668. (<https://doi.org/10.1021/acsapm.4c01765>).
145. Edlabadkar, V. A.; Soni, R.; ud Doulah, ABM S.; Owusu, S. Y.; Hackett, S.; Bartels, J.; Leventis, N.; Sotiriou-Leventis, C. "CO₂ Uptake by Microporous Carbon Aerogels Derived from Polybenzoxazine and Analogous All-Nitrogen Polybenzodiazine Aerogels," *Chem. Mater.* **2024**, *36*(3), 1172-1187. (<https://doi.org/10.1021/acs.chemmater.3c01717>).
144. ud Doulah, ABM S.; Mandal, C.; Majedi Far, H.; Edlabadkar, V. A.; Soni, R.; Owusu, S. Y.; Leventis, N.; Sotiriou-Leventis, C. "Using Catalysis to Control the Morphology and Stiffness of Shape Memory Poly(isocyanurate-urethane) (PIR-PUR) Aerogels," *ACS Appl. Polym. Mater.* **2023**, *5*(9), 6851-6863. (<https://doi.org/10.1021/acsapm.3c00882>).
143. Edlabadkar, V. A.; Gorla, S.; Soni, R. U.; ud Doulah, ABM S.; Gloriod, J., Hackett, S.; Leventis, N.; Sotiriou-Leventis, C. "Polybenzodiazine aerogels: all-nitrogen analogues of polybenzoxazines – Synthesis, characterization, and high-yield conversion to nanoporous carbons," *Chem. Mater.* **2023**, *35*(2), 432-446. (<https://doi.org/10.1021/acs.chemmater.2c02797>).
142. Soni, R. U.; Edlabadkar, V. A.; Greenan, D.; Rewatkar, P. M.; Leventis, N.; Sotiriou-Leventis, C. "Preparation of Carbon Aerogels from Polymer-Cross-Linked Xerogel Powders without Supercritical Fluid Drying and Their Application in Highly Selective CO₂ Adsorption," *Chem. Mater.* **2022**, *34*(11), 4828-4847. (<https://doi.org/10.1021/acs.chemmater.1c04170>).
141. Soni, R. U.; Edlabadkar, V. A.; Rewatkar, P. M.; ud Doulah, ABM S.; Leventis, N.; Sotiriou-Leventis, C. "Low-temperature Catalytic Synthesis of Graphite Aerogels from Polyacrylonitrile-crosslinked Iron Oxide and Cobalt Oxide Xerogel Powders" *Carbon* **2022**, *193*, 107-127.
140. Malakooti, S.; Hatamleh, M. I.; Zhang, R.; Tagvae, T.; Miller, M.; Ren, Y.; Xiang, N.; Qian, D.; Sotiriou-Leventis, C.; Leventis, N.; Lu, H. "Metamaterial-like Aerogels for Broadband Vibration Mitigation," *Soft Matter* **2021**, *17*(17), 4496-4503. (Featured on the cover of this issue).
139. Malakooti, S.; ud Doulah, A. B. M. S.; Ren, Y.; Kullkarni, V. N.; Soni, R. U.; Edlabadkar, V. A.; Zhang, R.; Vivod, S. L.; Sotiriou-Leventis, C.; Leventis, N.; Lu, H. "Meta-Aerogels: Auxetic Shape-Memory Polyurethane Aerogels," *ACS Appl. Polym. Mater.* **2021**, *3*(11), 5727-5738.
138. Majedi Far, H.; Lawson, S.; Al-Naddaf, Q.; Rezaei, F.; Sotiriou-Leventis, C.; Rownaghi, A. A. "Advanced pore characterization and adsorption of light gases over aerogel-derived activated carbon," *Microporous and Mesoporous Mater.* **2021**, *313*, 110833.
137. Malakooti, S.; Zhao, E.; Tsao, N.; Bian, N.; Soni, R. U.; Doulah, ABM S.; Sotiriou-Leventis, C.; Leventis, N.; Lu, H. "Synthesis of aerogel foams through a pressurized sol-gel method," *Polymer* **2020**, *208*, 122925.
136. Rewatkar, P. M.; Saeed, A. M.; Majedi Far, H.; Donthula, S.; Sotiriou-Leventis, C.; Leventis, N. "Polyurethane Aerogels Based on Cyclodextrins: High-Capacity Desiccants Regenerated

- at Room Temperature by Reducing the Relative Humidity of the Environment," *ACS Appl. Mater. Interfaces* **2019**, *11*(37), 34292-34304.
135. Mandal, C.; Donthula, S.; Rewatkar, P.M.; Sotiriou-Leventis, C.; Leventis, N. "Experimental deconvolution of depressurization from capillary shrinkage during drying of silica wet-gels with SCF CO₂ why aerogels shrink?" *J. Sol-gel Sci. Technology* **2019**, *92*(1), 84-100.
 134. Mandal, C.; Donthula, S.; Majedi Far, H.; Saeed, A. M.; Sotiriou-Leventis, C.; Leventis, N. "Transparent, mechanically strong, thermally insulating cross-linked silica aerogels for energy-efficient windows," *J. Sol-gel Sci. Technology* **2019**, *92*(3), 662-680.
 133. Taghvaei, T.; Donthula, S.; Rewatkar, P. M.; Majedi Far, H.; Sotiriou-Leventis, C.; Leventis, N. "K-index: Descriptor, predictor, and correlator of complex nanomorphology to other material properties," *ACS Nano* **2019**, *13*(3), 3677-3690.
 132. Rewatkar, P. M.; Soni, R. U.; Sotiriou-Leventis, C.; Leventis, N. "A Cobalt Sunrise: Thermites Based on LiClO₄-Filled Co(0) Aerogels Prepared from Polymer-Cross-Linked Cobaltia Xerogel Powders," *ACS Appl. Mater. Interfaces* **2019**, *11*(25), 22668-22676.
 131. Majedi Far, H.; Rewatkar, P. M.; Donthula, S.; Taghvaei, T.; Saeed, A. M.; Sotiriou-Leventis, C.; Leventis, N. "Exceptionally High CO₂ Adsorption at 273 K by Microporous Carbons from Phenolic Aerogels: The Role of Heteroatoms in Comparison with Carbons from Polybenzoxazine and Other Organic Aerogels," *Macromol. Chem. Phys.* **2019**, 1800333 (Invited for special issue honoring H. Ishida's 70th birthday.)
 130. Malakooti, S.; Qin, G.; Mandal, C.; Soni, R.; Taghvaei, T.; Ren, Y.; Chen, H.; Tsao, N.; Shiao, J.; Kulkarni, S. S.; Sotiriou-Leventis, C.; Leventis, N.; Lu, H. "Low-Cost Ambient-Dried, Superhydrophobic, High Strength, Thermally Insulating, and Thermally Resilient Polybenzoxazine Aerogels," *ACS Appl. Polym. Mater.* **2019**, *1*, 2322-2333.
 129. Mandal, C.; Donthula, S.; Soni, R.; Bertino, M.; Sotiriou-Leventis, C.; Leventis, N. "Light Scattering and Haze in TMOS-co-APTES Silica Aerogels," *J. Sol-gel Sci. Technol.* **2018** (<https://doi.org/10.1007/s10971-018-4801-0>). Invited for special issue in memory of Professor Jean Phalippou.
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- National Meeting, Boston, MA, Wednesday, August 22, 2018 (Porous Polymer Symposium - PMSE 679).
122. "Sturdy, Monolithic SiC and Si₃N₄ Aerogels from Compressed Polymer-Crosslinked Silica Xerogel Powders," P. Rewatkar, T. Taghvaei, A. M. Saeed, S. Donthula, C. Mandal, N. Chandrasekaran, T. Leventis, T. K. Shruthi, C. Sotiriou-Leventis, N. Leventis, 256th ACS National Meeting, Boston, MA, Wednesday, August 22, 2018 (INOR 748)
 121. "Structural reorganization of silica wet-gels upon drying: Why aerogels shrink?" C. Mandal, S. Donthula, C. Sotiriou-Leventis, N. Leventis, 256th ACS National Meeting, Boston, MA, Wednesday, August 22, 2018 (INOR 746).
 120. "Study of Haziness in Silica Wet-gels and in Mechanically Strong, Thermally Insulating Polymer-crosslinked Aerogels," C. Mandal, S. Donthula, C. Sotiriou-Leventis, N. Leventis, 256th ACS National Meeting, Boston, MA, Monday, August 20, 2018 (SCI-MIX INOR 745).
 119. "Study of Haziness in Silica Wet-gels and in Mechanically Strong, Thermally Insulating Polymer-crosslinked Aerogels," C. Mandal, S. Donthula, C. Sotiriou-Leventis, N. Leventis, 256th ACS National Meeting, Boston, MA, Wednesday, August 22, 2018 (INOR 745).
 118. "Oxidative Ring-fusion Aromatization and its Role to Pyrolytic Carbonization of Polybenzoxazines and Other Phenolic Resins," H. Majedi Far, S. Donthula, S. Mahadik-Khanolkar, T. Taghvaei, A. M. Saeed, N. Leventis, C. Sotiriou-Leventis, Organic Chemistry Day, U. of Missouri-Columbia, Columbia, MO, April 14, 2018 (Paper No. 14).
 117. "Oxidative Ring-fusion Aromatization and its Role to Pyrolytic Carbonization of Polybenzoxazines and Other Phenolic Resins," N. Leventis, S. Donthula, H. Majedi Far, S. Mahadik-Khanolkar, C. Mandal, A. M. Saeed, C. Sotiriou-Leventis, 255th ACS National Meeting, New Orleans, LA, Monday, March 19, 2018 (PMSE 137 – Third International Symposium on Polybenzoxazines: Towards Diamond Jubilee of Benzoxazine Chemistry).
 116. "Oxidative Ring-fusion Aromatization and its Role to Pyrolytic Carbonization of Polybenzoxazines and Other Phenolic Resins," N. Leventis, S. Donthula, H. Majedi Far, S. Mahadik-Khanolkar, C. Mandal, A. M. Saeed, C. Sotiriou-Leventis, 255th ACS National Meeting, New Orleans, LA, Monday, March 19, 2018 (SCI-MIX PMSE 137).
 115. "Multiscale Hierarchical Nanoporous Polyurethane Aerogels Based on α - and β -Cyclodextrin for CO₂ Sequestration, Water Vapor Uptake and Cationic Dye Separation," P. M. Rewatkar, M. A. Saeed, S. Donthula, H. Majedi Far, N. Leventis, C. Sotiriou-Leventis, 52nd ACS Midwest Regional Meeting, Lawrence, KS, October 18, 2017 (SCI-MIX - Invited).
 114. "Structural Reorganization of Silica Wet-gels Upon Drying: Why Aerogels Shrink?" C. Mandal, S. Donthula, C. Sotiriou-Leventis, N. Leventis, 52nd ACS Midwest Regional Meeting, Lawrence, KS, October 20, 2017 (Materials Chemistry 524).
 113. "Highly Porous SiC & Si₃N₄ Monoliths via Carbothermal Reduction of Polymer-crosslinked Sol-gel Silica Powder Compacts," P. M. Rewatkar, T. Taghvaei, M. A. Saeed, S. Donthula, T. Leventis, J. Schisler, C. Sotiriou-Leventis, N. Leventis, 52nd ACS Midwest Regional Meeting, Lawrence, KS, October 20, 2017 (Materials Chemistry 514).
 112. "Multiscale Hierarchical Nanoporous Polyurethane Aerogels Based on α - and β -Cyclodextrin for CO₂ Sequestration, Water Vapor Uptake and Cationic Dye Separation," P. M. Rewatkar; M. A. Saeed, S. Donthula, H. Majedi Far, N. Leventis, C. Sotiriou-Leventis, 52nd ACS Midwest Regional Meeting, Lawrence, KS, October 20, 2017 (Materials Chemistry 525).
 111. "K-Index: a Quantitative Tool that Describes Complex Soft-matter Nanomorphology and Correlates it to Synthetic Conditions," T. Yazdeli, S. Donthula, C. Sotiriou-Leventis, N.

- Leventis, 52nd ACS Midwest Regional Meeting, Lawrence, KS, October 20, 2017 (Materials Chemistry 434).
110. "Significance of Inserting an Oxidative Ring-fusion Aromatization Step at the Early Stages of Pyrolytic Carbonization of Polybenzoxazines and other Phenolic Resins," H. Majedi Far, S. Donthula, S. Mahadik, T. Yazdeli, M. A. Saeed, N. Leventis, C. Sotiriou-Leventis, 52nd ACS Midwest Regional Meeting, Lawrence, KS, October 20, 2017 (Materials Chemistry 320).
 109. "Shape Memory Superelastic Poly(isocyanurate-urethane) Aerogels (PIR-PUR) for Deployable Panels and Biomimetic Applications," S. Donthula, C. Mandal, T. Leventis, J. Schisler, M. A. Saeed, C. Sotiriou-Leventis, N. Leventis, 52nd ACS Midwest Regional Meeting, Lawrence, KS, October 19, 2017 (Midwest ACS Graduate Awards Symposium 174).
 108. "Polymeric Aerogels as a Point of Departure for Fundamental Mechanistic Studies – The Case of Polybenzoxazine and Other Phenolic Type Aerogels," N. Leventis, S. Donthula, S. Mahadik-Khanolkar, H. Majedi Far, M. A. Saeed, C. Sotiriou-Leventis, Spring 2017 MRS Meeting, Phoenix, AZ, April 20, 2017 (NM3.10.03).
 107. "Shape Memory Polyurethane Aerogels for Deployable Panels and Biomimetic Applications," N. Leventis, S. Donthula, C. Mandal, J. Schisler, T. Leventis, C. Sotiriou-Leventis, Spring 2017 MRS Meeting, Phoenix, AZ, April 18, 2017 (NM3.3.02).
 106. "Nanoporous Polyurea from Triisocyanates Reacting with Mineral Acids," M. A. Saeed, S. Donthula, H. Majedi Far, P. M. Rewatkar, C. Sotiriou-Leventis, N. Leventis, 251st ACS National Meeting, San Diego, CA, March 16, 2016 (PMSE 541)
<https://ep70.eventpilotadmin.com/web/page.php?page=IntHtml&project=ACS16spring&id=2396362>.
 105. "One-step Synthesis of Highly Porous Silicon Nitride and Silicon Carbide from Polymer-Crosslinked Silica Aerogels," M. A. Saeed, P. M. Rewatkar, S. Donthula, C. Sotiriou-Leventis, N. Leventis, 251st ACS National Meeting, San Diego, CA, March 15, 2016 (PMSE 392)
<https://ep70.eventpilotadmin.com/web/page.php?page=IntHtml&project=ACS16spring&id=2400259>
 104. "Multiscale Hierarchical Nanoporous Aerogels based on β -Cyclodextrin for CO₂ Sequestration," P. M. Rewatkar, M. A. Saeed, S. Donthula, H. Majedi Far, N. Leventis, C. Sotiriou-Leventis, 251st ACS National Meeting, San Diego, CA, March 15, 2016 (PMSE 393)
<https://ep70.eventpilotadmin.com/web/page.php?page=IntHtml&project=ACS16spring&id=2400304>
 103. "Multiscale Hierarchical Nanoporous Aerogels based on β -Cyclodextrin for CO₂ Sequestration," P. M. Rewatkar, M. A. Saeed, S. Donthula, H. Majedi Far, N. Leventis, C. Sotiriou-Leventis, 251st ACS National Meeting, San Diego, CA, March 14, 2016 (SCI-MIX PMSE 393)
<https://ep70.eventpilotadmin.com/web/page.php?page=IntHtml&project=ACS16spring&id=2400304>
 102. "Ferrocene-based Polyamide Aerogels: Graphitization, Transmetalation and Use in Heterogeneous Catalysis," M. A. Saeed, C. Wisner, S. Donthula, A. Mumtaz, C. Sotiriou-Leventis, N. Leventis, Organic Chemistry Day, U. of Missouri-Columbia, Columbia, MO, April 11, 2015 (Paper No. 45).
 101. "Multiscale Hierarchical Nanoporous Aerogels Based on β -Cyclodextrin," P. M. Rewatkar, M. A. Saeed, S. Donthula, H. Majedi Far, N. Leventis, C. Sotiriou-Leventis, Organic Chemistry Day, U. of Missouri-Columbia, Columbia, MO, April 11, 2015 (Paper No. 44).

100. "Factors that Affect the Assembly of Organic nanoparticles into Fibers vs. Clusters," T. T. Yazdeli, S. Donthula, C. Sotiriou-Leventis, N. Leventis, Organic Chemistry Day, U. of Missouri-Columbia, Columbia, MO, April 11, 2015 (Paper No. 43).
99. "Shape-Memory Polyurethane Aerogels," S. Donthula, F. Zheng, C. Sotiriou-Leventis, N. Leventis, Organic Chemistry Day, U. of Missouri-Columbia, Columbia, MO, April 11, 2015 (Paper No. 14).
98. "Synthesis and Characterization of Robust Terephthalaldehyde-Phloroglucinol (TPOL) Aerogels as Precursors for Nanoporous Carbons," H. Majedi Far, M. A. Saeed, S. Donthula, N. Leventis, C. Sotiriou-Leventis, Organic Chemistry Day, U. of Missouri-Columbia, Columbia, MO, April 11, 2015 (Paper No. 03).
97. "Ferrocene-based Polyamide Aerogels: Graphitization, Transmetalation and Use in Heterogeneous Catalysis," M. A. Saeed, C. Wisner, S. Donthula, A. Mumtaz, C. Sotiriou-Leventis, N. Leventis, 249th ACS National Meeting, Denver, CO, March 24, 2015 (PMSE 392).
96. "Synthesis and Characterization of Robust Terephthalaldehyde-phloroglucinol (TPOL) Aerogels as Precursors for Nanoporous Carbons," H. Majedi Far, M. A. Saeed, S. Donthula, N. Leventis, C. Sotiriou-Leventis, 249th ACS National Meeting, Denver, CO, March 24, 2015 (PMSE 383).
95. "Shape-Memory Polyurethane Aerogels," S. Donthula, F. Zheng, C. Sotiriou-Leventis, N. Leventis, 249th ACS National Meeting, Denver, CO, March 24, 2015 (PMSE 361).
94. "Ferrocene-based Polyamide Aerogels: Graphitization, Transmetalation and Use in Heterogeneous Catalysis," M. A. Saeed, C. Wisner, S. Donthula, A. Mumtaz, C. Sotiriou-Leventis, N. Leventis, 249th ACS National Meeting, Denver, CO, March 23, 2015 (SCI-MIX-PMSE 392).
93. "Synthesis and Characterization of Robust Terephthalaldehyde-Phloroglucinol (TPOL) Aerogels as Precursors for Nanoporous Carbons," H. Majedi Far, M. A. Saeed, S. Donthula, N. Leventis, C. Sotiriou-Leventis, 249th ACS National Meeting, Denver, CO, March 23, 2015 (SCI-MIX-PMSE 383).
92. "Shape-Memory Polyurethane Aerogels," S. Donthula, F. Zheng, C. Sotiriou-Leventis, N. Leventis, 249th ACS National Meeting, Denver, CO, March 23, 2015 (SCI-MIX-PMSE 361).
91. "Shape-Memory Polyurethane Aerogels," S. Donthula, F. Zheng, C. Sotiriou-Leventis, N. Leventis, 49th Regional ACS Meeting, U. of Missouri-Columbia, Columbia, MO, November 13, 2014, Polymer and Materials Chemistry Session No. 290.
90. "Ferrocene-based Polyamide Aerogels: Graphitization, Transmetalation and Use in Heterogeneous Catalysis," M. A. Saeed, C. Wisner, S. Donthula, A. Mumtaz, C. Sotiriou-Leventis, N. Leventis, 49th Regional ACS Meeting, U. of Missouri-Columbia, Columbia, MO, November 12, 2014, SCI-MIX No. 17.
89. "Synthesis and Characterization of Robust Terephthalaldehyde-phloroglucinol (TPOL) Aerogels as Precursors for Nanoporous Carbons," H. Majedi Far, M. A. Saeed, S. Donthula, N. Leventis, C. Sotiriou-Leventis, 49th Regional ACS Meeting, U. of Missouri-Columbia, Columbia, MO, November 12, 2014, SCI-MIX No. 24.
88. "Polybenzoxazine Aerogels: Synthesis, Characterization and Use in the Carbothermal Synthesis of Nanoporous Metal and Alloy Aerogels," S. Donthula, S. Mahadik-Khanolkar, C. Sotiriou-Leventis, N. Leventis, 49th Regional ACS Meeting, U. of Missouri-Columbia, Columbia, MO, November 13, 2014, Polymer & Materials Chemistry Session No. 287.

87. "Polybenzoxazine Aerogels: Synthesis, Characterization and Use in the Carbothermal Synthesis of Nanoporous Metal and Alloy Aerogels," N. Leventis, C. Sotiriou-Leventis, S. Mahadik-Khanolkar, S. Donthula, International Society for Advancement of Supercritical Fluids, Seminar on Aerogels, Hamburg University of Technology (TUHH), October 6, 2014, Hamburg, Germany (Poster Presentation – P1).
86. "Isocyanate Derived Aerogels: Convenient Inexpensive Synthesis not only of Polyurethanes and Polyureas, but also of Polyimides and Polyamides," N. Leventis, C. Sotiriou-Leventis, International Society for Advancement of Supercritical Fluids, Seminar on Aerogels, Hamburg University of Technology (TUHH), October 6, 2014, Hamburg, Germany (Invited Keynote Lecture).
85. "In-Situ Neutron Diffraction of Lithium Vanadium Oxide Cathodes," T. M. Fears, N. Leventis, C. Sotiriou-Leventis, J. G. Winiarz, H. Taub, H. Kaiser, 247th ACS National Meeting, Dallas, TX, March 19, 2014 (INOR 848).
84. "Polydicyclopentadiene Aerogels via ROMP: Nanostructure Control with First and Second Generation Grubbs Catalysts," A. Bang, D. Mohite, C. Sotiriou-Leventis, N. Leventis, 247th ACS National Meeting, Dallas, TX, March 16, 2014 (PMSE 002).
83. "Assembly of Polymeric Nanoparticles into Fibers versus Clusters: Experiment and Simulation," C. Buback, P. McCarver, C. Sotiriou-Leventis, N. Leventis, Missouri S&T Undergraduate Research Conference, April 3, 2013 (won 1st place in the Oral Science Presentation Category)
82. "Inexpensive Synthesis of Low-density Nanofibrous Vanadia Monoliths from VOCl_3 ," T. Fears, S. Mahadik-Khanolkar, J. G. Winiarz, C. Sotiriou-Leventis, N. Leventis, 245th National ACS Meeting, New Orleans, LA, April 8, 2013 (COLL 360).
81. "Nanoporous Flexible Polyurethane-acrylate Aerogels," A. Bang, C. Buback, C. Sotiriou-Leventis, N. Leventis, 245th Nat. ACS Meeting, New Orleans, LA, April 9, 2013 (PMSE 332).
80. "Flexible Polyurea Aerogels: The effect of the Polarity of the Gelation Medium on the Nanomorphology," C. Chidambareswarapattar, C. Sotiriou-Leventis, N. Leventis, 245th National ACS Meeting, New Orleans, LA, April 11, 2013 (POLY 569).
79. "Polybenzoxazine Aerogels: Synthesis, Characterization and Conversion to Carbon and Graphite Aerogels," S. Mahadik-Khanolkar, C. Wisner, G. Churu, H. Lu, N. Leventis, C. Sotiriou-Leventis, 245th National ACS Meeting, New Orleans, LA, April 9, 2013 (PMSE 242).
78. "From Flexible to Hard Polyurethane Aerogels: The Effect of Molecular Functionality versus Molecular Rigidity," C. Chidambareswarapattar, C. Sotiriou-Leventis, N. Leventis, Council of Graduate Students (CGS)-Graduate Research Showcase-2012 (GRS), Rolla, MO, April 12, 2012 (Poster No. 4; Received the 3rd Best Poster Award, out of 68 participants.)
77. "Monolithic Cellular Graphitic Carbon from ROMP-derived Polydicyclopentadiene Aerogels," D. Mohite, S. Mahadik, C. Sotiriou-Leventis, N. Leventis, 243rd National ACS Meeting, San Diego, CA, March 26, 2012 (COLL 335).
76. "Rigid Macroporous Polynorbornene Monoliths by Ring Opening Metathesis Polymerization," D. Mohite, H. Luo, H. Lu, C. Sotiriou-Leventis, N. Leventis, 243rd National ACS Meeting, San Diego, CA, March 26, 2012 (COLL 342).
75. "Mechanically Strong Nanoporous Polyimides (Aerogels) from Anhydrides and Isocyanates: A Structure-Property Study," C. Chidambareswarapattar, Z. J. Larimore, C. Sotiriou-Leventis, N. Leventis, 243rd National ACS Meeting, San Diego, CA, March 28, 2012 (PMSE 419).

74. "One Pot Synthesis of Multifunctional Aramid Aerogels," C. Chidambareswarapattar, D. P. Mohite, J. Larimore, H. Lu, C. Sotiriou-Leventis, N. Leventis, 2011 MRS Fall Meeting Boston, MA, December 1, 2011, (Multifunctional Polymer Based Materials II, V17.36, Abstract No. 1152151).
73. "From Flexible to Hard Polyurethane Aerogels: The Effect of Molecular Functionality vs. Molecular Rigidity," C. Chidambareswarapattar, J. M. Loeb, Z. Larimore, L. Dharani, H. Luo, H. Lu, H. Lu, C. Sotiriou-Leventis, N. Leventis, 2011 MRS Fall Meeting, Boston, MA, December 1, 2011 (Multifunctional Polymer Based Materials II, V17.37, Abstract No. 1154151).
72. "Green Route to Carbon Aerogels," A. G. Sadekar, A. Bang, N. Leventis, C. Sotiriou-Leventis 242nd ACS National Meeting, Denver, CO, August 29, 2011 (COLL 163).
71. "Polydicyclopentadiene Aerogels Grafted with Polymethylmethacrylate," D. Mohite, Z. Larimore, C. Sotiriou-Leventis, N. Leventis 242nd ACS National Meeting, Denver, CO, August 29, 2011 (SCI-MIX - PMSE 185).
70. "Silica and Dysprosia Aerogels as Drug Carriers for Indomethacin and Paracetamol," A. Bang, A. Sadekar, B. Curtin, C. Buback, S. Acar, N. Leventis, C. Sotiriou-Leventis 242nd ACS National Meeting, Denver, CO, August 29, 2011 (SCI-MIX - PMSE 28).
69. "Polydicyclopentadiene Aerogels Grafted with Polymethylmethacrylate," D. Mohite, Z. Larimore, C. Sotiriou-Leventis, N. Leventis 242nd ACS National Meeting, Denver, CO, August 28, 2011 (PMSE 185).
68. "Silica and Dysprosia Aerogels as Drug Carriers for Indomethacin and Paracetamol," A. Bang, A. Sadekar, B. Curtin, C. Buback, S. Acar, N. Leventis, C. Sotiriou-Leventis 242nd ACS National Meeting, Denver, CO, August 30, 2011 (PMSE 28).
67. "Polyimide Aerogels by Ring Opening Metathesis Polymerization (ROMP)," D. Mohite, Z. Larimore, G. Churu, H. Lu, C. Sotiriou-Leventis, N. Leventis 241st ACS National Meeting, Anaheim, CA, March 30, 2011 (POLY 333).
66. "Functionally Graded Polyurea Aerogels: Synthesis and Characterization," S. S. Mahadik, N. Chandrasekaran, S. Mulik, Z. Larimore, G. Churu, H. Lu, J. T. Mang, C. Sotiriou-Leventis, N. Leventis 241st ACS National Meeting, Anaheim, CA, March 30, 2011 (POLY 332).
65. "Mechanically Strong Acrylonitrile-Based Aerogels via Free Radical Polymerization and their Conversion to Porous Carbons," A. G. Sadekar, A. Bang, C. Sotiriou-Leventis, N. Leventis 241st ACS National Meeting, Anaheim, CA, March 29, 2011 (PMSE 231).
64. "Functionally Graded Polyurea Aerogels: Synthesis and Characterization," S. S. Mahadik, N. Chandrasekaran, S. Mulik, Z. Larimore, G. Churu, H. Lu, J. T. Mang, C. Sotiriou-Leventis, N. Leventis 241st ACS National Meeting, Anaheim, CA, March 28, 2011 (SCI-MIX - POLY 332).
63. "Mechanically Strong Acrylonitrile-Based Aerogels via Free Radical Polymerization and their Conversion to Porous Carbons," A. G. Sadekar, A. Bang, C. Sotiriou-Leventis, N. Leventis 241st ACS National Meeting, Anaheim, CA, March 28, 2011 (SCI-MIX - PMSE 231).
62. "One-Step Polyimide Aerogels from Anhydrides and Isocyanates," C. Chidambareswarapattar, C. Sotiriou-Leventis, N. Leventis, 240th ACS National Meeting, Boston, MA, August, 2010 (POLY 294).
61. "Strong Silica Aerogels Crosslinked with Polynorbornene via Ring-Opening Metathesis Polymerization (ROMP)," D. Mohite, Z. Larimore, N. Leventis, C. Sotiriou-Leventis, 240th ACS National Meeting, Boston, MA, August, 2010 (POLY 97).

60. "Porous Monolithic Silicon Carbide Aerogels from Polyacrylonitrile-Coated 3D Silica Networks," A. G. Sadekar, N. Chandrasekaran, C. Sotiriou-Leventis, N. Leventis, 240th ACS National Meeting, Boston, MA, August, 2010 (PMSE 319).
59. "Efficient One-Step Synthesis of Mechanically Strong, Flame Retardant Polyurea Aerogels," N. Chandrasekaran, S. Mulik, Z. Larimore, G. Churu, H. Lu, C. Sotiriou-Leventis, N. Leventis, 240th ACS National Meeting, Boston, MA, August, 2010 (POLY 265).
58. "Pyrolytic Conversion of Organic Aerogels into Monolithic Meso- and Macroporous Carbon," N. Leventis, C. Sotiriou-Leventis, N. Chandrasekaran, C. Chidambareswarapattar, S. Mahadik, D. Mohite, S. Mulik, A. G. Sadekar, 217th ECS Meeting, Vancouver, Canada, April 26, 2010 (1503).
57. "Unusual Orientation of Pyrylium Guests in Cucurbituril Hosts," A. Thangavel, C. Sotiriou-Leventis and N. Leventis, 23rd Annual Organic Chemistry Day, University of Missouri-Columbia, Columbia, MO, April 17, 2010.
56. "One Pot Synthesis of Interpenetrating Organic/Inorganic Networks of Resorcinol-Formaldehyde (RF)/CuO Aerogels and Xerogels: Nanostructured Energetic Materials," N. Chandrasekaran, A. Sadekar, C. Sotiriou-Leventis, N. Leventis, Graduate Research Showcase 2010, Missouri University of Science and Technology, Rolla, MO, April 12, 2010.
55. "Click Synthesis of Monolithic Silicon Carbide (SiC) Aerogels," A. Sedakar, N. Chandrasekaran, C. Sotiriou-Leventis, N. Leventis, 92nd Biannual Conference of the Central States Microscopy and Microanalysis Society, Rolla, MO, November 10, 2009.
54. "Probing the Steric Effect of 2,6-Disubstituted-4-phenylpyrylium Inclusion Complexes in Cucurbit[7]uril," A. Thangavel, C. Sotiriou-Leventis, N. Leventis, 22nd Annual Organic Chemistry Day, University of Missouri-Columbia, Columbia, MO, April 18, 2009.
53. "Smelting in the Age of Nano: Iron Aerogels," N. Chandrasekaran, N. Leventis, C. Sotiriou-Leventis, A. Mumtaz, 237th ACS National Meeting, Salt Lake City, UT, March 17-21, 2009 (COLL 351).
52. "Probing the Steric Effect of 2,6-Disubstituted-4-phenylpyrylium Inclusion Complexes with Cucurbit[7]uril," A. Thangavel, C. Sotiriou-Leventis, N. Leventis, 237th ACS National Meeting, Salt Lake City, UT, March 17-21, 2009 (ORG 359).
51. "Crosslinked Templated Mesoporous Silica Aerogels as Multifunctional Materials," H. Lu, H. Luo, G. Churu, S. Mulik, C. Sotiriou-Leventis, N. Leventis, SAMPE Fall Technical Conference, Symposium on "Design for Multifunctionality: Capability versus Application," Memphis, TN, Sept 8-11, 2008.
50. "Assemblies of Nanoparticles as 3D Scaffolds for New Materials Design: From Polymer Crosslinked Aerogels to Polymer Matrix Composites," N. Leventis, C. Sotiriou-Leventis, S. Mulik, V. Patil, D. Mohite, Y. Zhang, H. Lu, 236th ACS National Meeting, Philadelphia, PA, August 17-21, 2008 (POLY 58).
49. "Compressive Behavior of Crosslinked Mesoporous Silica Aerogels at High Strain Rates," H. Lu, H. Luo, S. Mulik, C. Sotiriou-Leventis, N. Leventis, 236th ACS National Meeting, Philadelphia, PA, August 17-21, 2008 (POLY 79).
48. "Adhesion Enhancement of Polymeric Films on Glass Surfaces by Silane Derivatives of Azobisisobutyronitrile (AIBN)," S. Mulik, C. Sotiriou-Leventis, N. Leventis, 236th ACS National Meeting, Philadelphia, PA, August 17-21, 2008 (POLY 565).
47. "Host-guest Interactions of Cucurbit[7]uril with *N*-quaternized-4-(*p*-substituted benzoyl) pyridinium Cations and Control of the Ketone to *gem*-Diol Equilibrium," A. Thungavel, C.

- Sotiriou-Leventis, N. Leventis, 235th ACS National Meeting, New Orleans, LA, April 6-10, 2008 (ORG 299).
46. "Preparation of Macroporous Conductive Carbon Aerogels from Pyrolysis of Isocyanate-Crosslinked Resorcinol Formaldehyde Aerogels," S. Mulik, C. Sotiriou-Leventis, N. Leventis, 235th ACS National Meeting, New Orleans, LA, April 6-10, 2008 (SciMix 317).
 45. "Preparation of Macroporous Conductive Carbon Aerogels from Pyrolysis of Isocyanate-Crosslinked Resorcinol Formaldehyde Aerogels," S. Mulik, C. Sotiriou-Leventis, N. Leventis, 235th ACS National Meeting, New Orleans, LA, April 6-10, 2008 (PMSE 317).
 44. "Photolithographically Patterned Covalently Bonded Polythiophene Films Using in Tandem Sol-gel, Surface Initiated Free Radical and Redox Polymerization Methods," A. Sadekar, N. Chandrasekaran, S. Mulik, C. Sotiriou-Leventis, N. Leventis, 235th ACS National Meeting, New Orleans, LA, April 6-10, 2008 (PMSE 336).
 43. "Host-Guest Interactions of Cucurbit[7]uril with *N*-Quaternized-4-(*p*-substituted benzoyl) Pyridinium Cations and Control of the Ketone to *gem*-Diol Equilibrium," A. Thangavel, A.-M. M. Rawashdeh, C. Sotiriou-Leventis, N. Leventis, 21st Annual Organic Chemistry Day, University of Missouri-Columbia, Columbia, MO, April 5, 2008.
 42. "Photolithographically Patterned Covalently Bonded Polythiophene Films Using in Tandem Sol-gel, Surface Initiated Free Radical and Redox Polymerization Methods," A. Sadekar, N. Chandrasekaran, S. Mulik, C. Sotiriou-Leventis, N. Leventis, 21st Annual Organic Chemistry Day, University of Missouri-Columbia, Columbia, MO, April 5, 2008.
 41. "Preparation of Macroporous Conductive Carbon Aerogels from Pyrolysis of Isocyanate-Crosslinked Resorcinol Formaldehyde Aerogels," S. Mulik, C. Sotiriou-Leventis, N. Leventis, 21st Annual Organic Chemistry Day, University of Missouri-Columbia, Columbia, MO, April 5, 2008.
 40. "Conformal Polymer Nano-Encapsulation of Templated Acid-Catalyzed Sol-Gel Mesoporous Silica Monoliths and Vastly Improved Mechanical Properties," N. Leventis, S. Mulik, X. Wang, C. Sotiriou-Leventis, H. Lu, G. Churu, A. Capecelatro, XIV International Sol-Gel Conference, Montpellier, France, September 2-7, 2007. (Best Poster Award.)
 39. "Crosslinking 3D Assemblies of Silica Nanoparticles (Aerogels) by Surface-Initiated Free Radical Polymerization of Styrene and Methylmethacrylate," N. Leventis, S. Mulik, C. Sotiriou-Leventis, 20th Annual Organic Chemistry Day, UM Columbia, April 28, 2007.
 38. "Crosslinking 3D Assemblies of Silica Nanoparticles (Aerogels) by Surface-Initiated Free Radical Polymerization of Styrene and Methylmethacrylate," N. Leventis, S. Mulik, C. Sotiriou-Leventis, 233rd ACS National Meeting, Chicago, IL, March 27, 2007 (POLY-396).
 37. "Conformal Internal Coating of Macroporous Co-continuous MCF-silicas with Isocyanate Derived Polymers," X. Wang, S. Mulik, C. Sotiriou-Leventis, N. Leventis, 232nd ACS National Meeting, San Francisco, CA, Sept. 12, 2006 (POLY-477; Nanoparticles and Microparticles).
 36. "Conformal Internal Coating of Macroporous Co-continuous MCF-silicas with Isocyanate Derived Polymers," X. Wang, S. Mulik, C. Sotiriou-Leventis, N. Leventis, 232nd ACS National Meeting, San Francisco, CA, September 11, 2006 (Sci-Mix-477).
 35. "Acid-Catalyzed Time-Efficient Synthesis of Resorcinol-Formaldehyde Aerogels and Crosslinking with Isocyanates," S. Mulik, C. Sotiriou-Leventis, N. Leventis, 232nd ACS National Meeting, San Francisco, CA, September 10, 2006 (POLY-35; Polymers in Nanotechnology).
 34. "Protection of 2-(3-Thienyl)ethanol with 3-Thienylacetic Acid and Functional Films by Electropolymerization of the Ester" S. Mulik, A. Dass, C. Sotiriou-Leventis, N. Leventis, 40th

- Midwest Regional ACS Meeting, Joplin, MO, Oct. 26-28, 2005 (POLY 99).
33. "Synthesis and electropolymerization of 2-(3-thienylethyl)-3-thiopheneacetate (1)," S. Mulik, A. Dass, C. Sotiriou-Leventis, N. Leventis, 230th National ACS Meeting, Washington, DC, Aug. 28-Sept. 1, 2005 (POLY 604 / Sci Mix).
 32. "Aspects of Bioorganic and Materials Chemistry" C. Sotiriou-Leventis, Cleveland State University, Cleveland, OH, April 22, 2005.
 31. "Redox-Active Star Molecules Incorporating the 4-Benzoylpyridinium Cation: Implications for the Charge Transfer Efficiency along Branches vs. Across the Perimeter in Dendrimers," J. Yang, A.-M. M. Rawashdeh, W. S. Oh, C. Sotiriou-Leventis, N. Leventis, 17th Annual Organic Chemistry Day, University of Missouri-Columbia, Columbia, MO, April 24, 2004 (ORGN 34).
 30. "Synthesis and Photoluminescent Properties of Arylethynyl Substituted 9,10-anthraquinones," J. Yang, A. Dass, C. Sotiriou-Leventis, N. Leventis, 17th Annual Organic Chemistry Day, University of Missouri-Columbia, Columbia, MO, April 24, 2004 (ORGN 22).
 29. "Silica Aerogels Doped with Ru(II) Tris(1,10-phenanthroline)-Electron Acceptor Dyads: Improving the Dynamic Range, Sensitivity and Response Time of Sol-Gel Based Oxygen Sensors," N. Leventis, A.-M. M. Rawashdeh, I. A. Elder, J. Yang, A. Dass, C. Sotiriou-Leventis, 17th Annual Organic Chemistry Day, University of Missouri-Columbia, Columbia, MO, April 24, 2004 (ORGN 17).
 28. "Redox-Active Star Molecules Incorporating the 4-Benzoylpyridinium Cation: Implications for the Charge Transfer Efficiency along Branches vs. Across the Perimeter in Dendrimers," J. Yang, A.-M. M. Rawashdeh, W. S. Oh, C. Sotiriou-Leventis, N. Leventis, 227th National ACS Meeting, Anaheim, CA, March 28-April 1, 2004 (ORGN 320 / Sci Mix).
 27. "Synthesis and Photoluminescent Properties of Arylethynyl Substituted 9,10-anthraquinones," J. Yang, A. Dass, C. Sotiriou-Leventis, N. Leventis, 227th National ACS Meeting, Anaheim, CA, March 28-April 1, 2004 (ORGN 321).
 24. "Silica Aerogels Doped with Ru(II) Tris(1,10-phenanthroline)-Electron Acceptor Dyads: Improving the Dynamic Range, Sensitivity and Response Time of Sol-Gel Based Oxygen Sensors," N. Leventis, A.-M. M. Rawashdeh, I. A. Elder, J. Yang, A. Dass, C. Sotiriou-Leventis, 227th National ACS Meeting, Anaheim, CA, March 28-April 1, 2004 (COLL 227).
 25. "Charge Propagation in Star Molecules as Models of Dendritic Systems," Abdel M. Rawashdeh, J. Yang, C. Sotiriou-Leventis, and N. Leventis, 16th Annual Organic Chemistry Day, University of Missouri-Columbia, Columbia, MO, April 26, 2003 (ORGN 10).
 24. "Isocyanate Cross-Linked Silica: Structurally Strong Aerogels," G. Zhang, A.-M. M. Rawashdeh, C. Sotiriou-Leventis and N. Leventis, 225th ACS Meeting, New Orleans, LA, March 24, 2003 (POLY 332).
 23. "Synthesis of Aerogel-Metal Cluster Composites by Gamma Radiolysis," J. F. Hund, M. F. Bertino, G. Zhang, C. Sotiriou-Leventis, N. Leventis, A. T. Tokuhira, and J. Farmer, 2002 MRS Fall Meeting, Boston, MA, December 2-6, 2002 (Paper No. 54706). (Appeared in print in the *Mat. Res. Soc. Proc.* 2003).
 22. "Evaluation of β -Carotene Geometric Isomers Against Radiation Induced Oxidative Stress," N. Aykin-Burns, A. M. M. Rawashdeh, C. Sotiriou-Leventis, and N. Ercal, 9th Annual meeting of The Oxygen Society, San Antonio, TX, November 20-24, 2002 (55).
 21. "Redox Chemistry of the *p*-Substituted-4-Benzoyl-*N*-Methylpyridinium Cation," N. Leventis; A.-M. M. Rawashdeh, G. Zhang, I. A. Elder, and C. Sotiriou-Leventis, 223rd ACS National Meeting, Orlando, FL, April 7-11, 2002 (ORGN 016).

20. "One-Step Synthesis and Redox Properties of Dodecahydro-3a,9a-Diazaperylene – The most Easily Oxidized *p*-phenylenediamine, Used As An Efficient Electron-Transfer Quencher of [Ru(bipy)₃]²⁺ and as a Precursor of 3a,9a-Diazaperylene," A.-M. M. Rawashdeh, C. Sotiriou-Leventis, X. Gao, X.; W. S. Oh, and N. Leventis, 223rd ACS National Meeting, Orlando, FL, April 7-11, 2002 (ORGN 149).
19. "Excited State Localization in [Ru(Bidentate Ligand)₃]²⁺ Complexes, and its Effect on the Quenching Rates of the MLCT - Excited States by Electron Donors and Acceptors," A.-M. M. Rawashdeh, X. Gao, I. A. Elder, N. Leventis, and C. Sotiriou-Leventis, 223rd ACS National Meeting, Orlando, FL, April 7-11, 2002 (ORGN 328).
18. "The Chemistry is in the News," University of Missouri-Columbia, Columbia, MO, September 21-23, 2001, C. Sotiriou-Leventis, invited participant.
17. "The Redox Chemistry of 4-Benzoyl-*N*-Methylpyridinium Cations in Acetonitrile with and without Proton Donors; the Role of Hydrogen Bonding," N. Leventis, I. A. Elder, X. Gao, E. W. Bohannan, C. Sotiriou-Leventis, A. M. Rawashdeh, T. J. Overschmidt, and K. R. Gaston, 14th Annual Organic Chemistry Day, University of Missouri-Columbia, Columbia, MO, April 28, 2001 (ORGN 24).
16. "Excited State Localization in [Ru(Bidentate Ligand)₃]²⁺ Complexes, and its Effect on the Quenching Rates of the MLCT- Excited States by Electron Donors and Acceptors," A. M. Rawashdeh, Xuerong Gao, I. A. Elder, N. Leventis, and C. Sotiriou-Leventis, 14th Annual Organic Chemistry Day, University of Missouri-Columbia, Columbia, MO, April 28, 2001 (ORGN 20).
15. "Synthesis and Spectroscopic Characterization of 2,7-Diazapyrenium Compounds," C. Sotiriou-Leventis, Z. Mao, and A.M. Rawashdeh, 35th Midwest Regional ACS meeting, St. Louis, MO, Oct. 25-28, 2000 (ORGN 158).
14. "Rehm-Weller Relationships Between the Quenching Constants of Ruthenium Complexes with a Series of Single Electron Transfer Quenchers," A. M. Rawashdeh, X. Gao, I. A. Elder, N. Leventis, and C. Sotiriou-Leventis, 35th Midwest Regional ACS meeting, St. Louis, MO, Oct. 25-28, 2000 (INOR 254).
13. "Synthesis and Electrochemical Characterization of *N*-Methyl-4-Benzoylpyridinium Salts as Viologen Analogues," N. Leventis, I. A. Elder, X. Gao, C. Sotiriou-Leventis, and A. M. Rawashdeh, 35th Midwest Regional ACS meeting, St. Louis, MO, Oct. 25-28, 2000 (ORGN 159).
12. "Photolithographic Patterning of Silica Xerogel Films on Glass," X. Gao, K. Gaston, N. Leventis, and C. Sotiriou-Leventis, 35th Midwest Regional ACS meeting, St. Louis, MO, Oct. 25-28, 2000 (SURF 314).
11. "A Convenient Synthesis of *N,N'*-Bis(2-propenyl)-2,7-Diazapyrenium Quaternary Salts," C. Sotiriou-Leventis and Z. Mao, 13th Annual Organic Chemistry Day, University of Missouri-Columbia, Columbia, MO, April 22, 2000 (ORGN 1).
10. "Evaluation of β -Carotene Isomers and Retinol as Radical Traps," C. Sotiriou-Leventis, C. M. Collins, and A. M. Rawashdeh, 219th ACS National Meeting, San Francisco, CA, March 26-30, 2000 (ORGN 461).
9. "A Convenient Synthesis of *N,N'*-Bis(2-propenyl)-2,7-Diazapyrenium Quaternary Salts, C. Sotiriou-Leventis and Z. Mao, 219th ACS National Meeting, San Francisco, CA, March 26-30, 2000 (ORGN 373).

8. "Relative Reactivities of β -Carotene Isomers and Retinol with Superoxide and Hydroperoxyl Radicals," C. Sotiriou-Leventis and C. M. Collins, 33rd ACS Midwest Regional Meeting, Broadview Hotel, Wichita, KS, November 5, 1998 (ORGN 200).
7. "Relative Reactivities of a Mixture of β -Carotene Isomers and Retinol with Superoxide and Hydroperoxyl Radicals," C. M. Collins and C. Sotiriou-Leventis, 216th National ACS Meeting, Boston, August 24, 1998 (CHED 275). **C. M. Collins received one of the ten prestigious national ACS travel awards (\$1,000) given to undergraduate students conducting research in organic chemistry to present this work.**
6. "Thermochemistry of β -Carotene as a means of Probing the Mechanism of its Anticarcinogenicity," C. Sotiriou-Leventis, University of Cyprus, Nicosia, Cyprus, May 28, 1998, *invited*.
5. "Electrochemical Study of the Reaction of Superoxide with Ketones," M. T. Canalas, C. Sotiriou-Leventis, and N. Leventis, 32nd ACS Midwest Regional Meeting, Tan-Tar-A Resort, Osage Beach, MO, October 31, 1997 (Analytical and Bioanalytical, Paper No. 37).
4. "Electrochemical Evidence for the Affinity of *n*-Alkyl Sulfonate Group-Modified Viologens to Gold," N. Leventis, C. Sotiriou-Leventis, M. Chen, and A. Jain, 214th ACS National Meeting, Las Vegas, NV, September 9, 1997 (COLL 83).
3. "Electrochemical Study of the Acid/Base-Type Reaction of Superoxide with Ketones," C. Sotiriou-Leventis, N. Leventis, M. Canalas, 213th ACS National Meeting, San Francisco, CA, April 13, 1997 (ANYL 75).
2. "Aspects of Bioorganic Chemistry," C. Sotiriou-Leventis, University of Missouri-Kansas City, March 27, 1997, *invited*.
1. "Aspects of Bioorganic Chemistry," C. Sotiriou-Leventis, University of Missouri-Rolla, October 6, 1995, *invited* (Homecoming).