RÉSUMÉ

Yury Gogotsi

Born December 16, 1961

Drexel University
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https://research.coe.drexel.edu/mse/nanomaterials

Education

D.Sc. Materials Engineering, National Academy of Sciences, Ukraine, 1995
Thesis title: *Interactions of Non-Oxide Structural Ceramics with High-Temperature Gaseous Media and Development of Methods for Improving Their Corrosion Resistance*
Ph.D. Physical Chemistry, Kyiv Polytechnic Institute, Ukraine, 1986
Thesis title: *High-Temperature Corrosion of Structural Ceramics Based on Silicon Nitride, Silicon Carbide and Boron Carbide.* Thesis advisor: Prof. V.A. Lavrenko
B.S./M.S. Metallurgy, Kyiv Polytechnic Institute, Ukraine, 1984 (with Honors, 5.0 perfect GPA)

Post-Doctoral Fellowships

Center for Materials Research, University of Oslo, Norway (with Per Kofstad)
1993 - 1995 NATO/Norwegian Research Council Fellowship
Hydrothermal synthesis and high-temperature oxidation of ceramics.
Tokyo Institute of Technology, Japan (with Masahiro Yoshimura)
1992 - 1993 Japan Society for the Promotion of Science (JSPS) Fellowship
Hydrothermal corrosion of SiC and hydrothermal synthesis of carbon.
University of Karlsruhe, Germany (with Fritz Thümmler and Georg Grathwohl)
1990 - 1992 A. von Humboldt Fellowship
Creep and high-temperature oxidation of silicon nitride-based ceramics.

Work History

Drexel University
Since 05/2017 Charles T. and Ruth M. Bach Endowed Professor
09/2010 – present Distinguished University Professor
09/2008 – 04/2017 Trustee Chair Professor of Materials Science and Engineering
02/2003 – present Founding Director, A.J. Drexel Nanomaterials Institute
12/2002 – 09/2007 Associate Dean of the College of Engineering for Special Projects
09/2002 – 08/2018 Professor of Chemistry (courtesy appointment)
11/2001 – present Professor of Mechanical Engineering and Mechanics (courtesy appointment)
08/2000 – 08-2008 Professor of Materials Science and Engineering
University of Illinois at Chicago
9/2001-8/2003 Adjunct Professor of Mechanical Engineering
1999-2000 Associate Professor of Mechanical Engineering with tenure
1999-2000 Assistant Director, UIC Research Resources Center
1996 –1999 Assistant Professor of Mechanical Engineering
University of Tübingen, Germany
1995 - 1996 Research Scientist
Hydrothermal behavior of carbon materials and hydrothermal synthesis of diamond.
Institute for Materials Science, Academy of Sciences of Ukraine, Kiev, Ukraine
1986 - 1990 Research Associate
Manufacturing and property characterization of engineering ceramics and ceramic matrix composites.

Visiting Professorships

Korea University
From March 1, 2026 Crimson Distinguished Professor
Linkoping University
From 09/2023 WISE Visiting Professor
Sumy State University, Ukraine
From 05/2022 Adjunct Professor of Nanoelectronics
Korean Advanced Institute of Science and Technology (KAIST), Korea
2016-2022 Adjunct Professor of Chemical and Biomolecular Engineering
Shinshu University, Japan
2016-2022 Distinguished Visiting Professor
Jilin University, Changchun, China
2016-2019 Distinguished Foreign Professor
Beijing University of Chemical Technology
2016-2019 Visiting Professor
Huazhong University of Science and Technology (HUST) in Wuhan, China
2012-2015 Guest Professor
University of Rome, Tor Vergata, Italy
2014 Guest professor
Dalian University of Technology, China
2008 - 2012 Cheung Kong Chair Professor (visiting)
Paul Sabatier University, Toulouse, France
2007-2008, 2021 Guest Professor
University of Limoges, France
1994, 1999, 2003, 2005 Guest Professor (summer appointment)

Courses Taught
At Drexel University:
MATE 510 Thermodynamics of Materials (6 times)
MATE 585 Nanostructured Carbon Materials (17 times)
MATE 580 Introduction to MEMS and Nanotechnology
MATE 580 Skills in Science Communication
MATE 580 Raman and Infrared Spectroscopy
MATE 536 Graduate Seminar (4 times)
MATE 491-493 Senior Design (full-year design course)
HON 200 Honors Seminar on Materials (Materials for Energy Section)
MATE 280 Advanced Materials Laboratory (20 times)
tDEC 211 Materials I (recitations, 5 times)
tDEC 180 First-Year Design (5 times)
MATE 340 Ceramics I
MATE 100 2-Day Introductory Course in Materials (6 times)

At Paul Sabatier University, Toulouse, France:
Carbon Nanomaterials for Energy-Related Applications (3 times)
(European Master Program, Materials for Energy Storage and Conversion)

At the University of Illinois at Chicago:
ME 494 Advanced Ceramic Materials
ME 403 Introduction to Composite Materials Design
ME 594 Advanced Diagnostics
ME/IE 396 Senior Design
ME/IE 380 Manufacturing Process Principles (2 times)

IE 342 Probability and Statistics for Engineers (5 times)
ME 291/HON 201 Materials for the 21st Century (2 times)

Research Interests

- 2D Carbides, Nitrides and Carbonitrides of Transition Metals (MXenes)
- Nanomaterials for Energy, Water, and Health Applications
- Chemistry of Nanostructured Carbons (nanotubes, onions, graphene, nanodiamond, and CDC)
- Use of Raman Spectroscopy in Materials Research
- Chemistry and Electrochemistry in Confinement
- Nanocomposites

Publications

2 books co-authored, 15 books edited, more than 1100 papers in peer-reviewed journals, more than 170 patent applications filed (more than 60 issued patents, approx. 30 licensed to industry), more than 300 plenary, keynote, and invited lectures and seminars. His papers have been cited > 367,000 times, and his h-index is 269. Nearly 80 papers cited > 1000 times each. The most cited paper has more than ~20,000 citations. Clarivate's "Highly Cited" in Chemistry, Engineering, and Materials Science, and Citations Laureate in Physics. The 2025 Stanford List, the most thorough bibliometric analysis, ranked him #2 in Nanotechnology and #21 across all scientific disciplines worldwide, based on 2024 Scopus citation data.

Professional Honors and Awards

2026 Shipley Distinguished Lecturer, Clarkson University
2026 Fellow, World Academy of Arts and Science
2026 Honorary Doctorate, Hasselt University, Belgium
2026 Honorary Doctorate, Kharkiv Polytechnic University, Belgium
2026 Davis Lecture in Materials Science, North Carolina State University
2025 Pregl Colloquium Speaker, National Institute of Chemistry, Ljubljana, Slovenia
2025 Robert C. Haddon Research Award, The Electrochemical Society
2024 Blaise Pascal Medal, European Academy of Sciences
2024 Marino Xanthos Memorial Lecture at New Jersey Institute of Technology
2024 MRS Communications Lecture Award, Materials Research Society
2024 Honorary Doctorate, Slovak Academy of Sciences
2024 Fellow, Academy of Europe – Academia Europaea
2024 Drexel College of Engineering Teaching Award
2024 Cornelius Pings Distinguished Lecture, University of Southern California
2023 Jan Czochralski Award, European Materials Research Society (E-MRS)
2023 Khwaja Fareed Innovation Research Award, KFUEIT, Pakistan
2023 Fellow, National Academy of Inventors
2022 Frontiers of Science & Society - Rustum Roy Lecture at MS&T Conference, ACerS
2022 Distinguished Lecture, University of Waterloo, Waterloo Institute of Nanotechnology
2022 Grigori Samsonov Medal and Award from the Ukrainian Materials Research Soc. (U-MRS)
2021 Materials Today Innovation Award, Elsevier
2021 MRS Medal, Materials Research Society
2021 Award for a Lasting and Outstanding Contribution to Materials Science and Engineering, MRS-Serbia
2021 Horizon Prize, Royal Society of Chemistry (RSC)
2021 Manuel Cardona Lecture, Institut Català de Nanociència i Nanotecnologia
2021 Honorary Doctorate, Sumy State University, Ukraine
2021 ACS Award in the Chemistry of Materials
2021 RASA-America Honorary Life Membership
2020 Ceramic Prize, The World Academy of Ceramics (given once every 4 years)
2020 ACS Philadelphia Section Award

2020 George Gamow Award from the Russian-American Science Association (RASA)
2019 Fellow, European Academy of Sciences (EurASc)
2019 Sosman Lecture, American Ceramic Society
2018 Citation Laureate (Web of Science/Clarivate) - work is deemed to be of Nobel stature
2018 The Friendship Award from the Chinese government
2018 Rudolf Zahradnik Lecture, Regional Center of Advanced Technologies and Materials, University of Olomouc, Czech Republic
2018 Honorary Doctorate, National Technical University of Ukraine - Kyiv Polytechnic Institute
2018 Fellow, The International Society of Electrochemistry
2018 Tis Lahiri Memorial Lecture, Vanderbilt University
2017 Energy Storage Materials Award, Elsevier
2017 Honorary Doctorate, Frantsevich Institute for Problems of Materials Science, National Academy of Sciences, Ukraine
2016 Nano Energy Award, Elsevier
2016 Drexel Award for Outstanding Career Scholarly Achievement
2016 Included in 100 Most Cited Researchers in Materials Science by Elsevier/Scopus
2015 RUSNANOPRIZE (International Nanotechnology Prize)
2015 Fellow, Royal Society of Chemistry
2015 Lee Hsun Award Lecture, Institute of Metal Research, CAS, China
2014 Doctor Honoris Causa, Paul Sabatier University, Toulouse, France
2014 Highly Cited Researcher in Materials Science and Chemistry, Thomson-Reuters/Clarivate (2014-2022)
2014 Fred Kavli Distinguished Lectureship in Nanotechnology, MRS Spring Meeting
2014 ASM Liberty Bell Chapter's Delaware Valley Materials Person of the Year
2014 Research Achievement Award, Department of Materials Science, Drexel University
2013 Ross Coffin Purdy Award from the American Ceramic Society
2012 European Carbon Association Award
2011 NANOSMAT Prize at the 6th NANOSMAT Conference
2011 ASM International Philadelphia Chapter Albert Sauveur Lecture Award
2011 Fellow, Materials Research Society (MRS)
2010 Chang Jiang Scholar Award, Ministry of Education of P.R. China
2009 Fellow, American Association for Advancement of Science (AAAS)
2008 Fellow, The Electrochemical Society
2006 Nano 50^{TM} Award from *NASA Tech Briefs Magazine*, Innovator of the Year
2006 Best Paper Award, American Society for Composites
2005 Fellow, American Ceramic Society
2005 Fellow, The World Innovation Foundation
2005 Drexel University College of Engineering Outstanding Research Award
2004 Academician, World Academy of Ceramics
2003 R&D 100 Award from *R&D Magazine* (awarded again in 2009)
2003 Roland B. Snow Award from the American Ceramic Society (also in 2005, 2007, 2012, 2013)
2002 S. Somiya Award from the International Union of Materials Research Societies
2002 G.C. Kuczynski Prize from the International Institute for the Science of Sintering
2002 Full Member, International Institute for the Science of Sintering
2002 Research Achievement Award from Drexel University (awarded again in 2009)
2002-2004 10^6 Club of Drexel University (more than $1M external funding per year)
2001 Winner of the Collegiate Inventors Competition
2001-2015 Multiple listings in Who's Who in America, Who's Who in the World, Who's Who Among America's Teachers, Who's Who in Science and Engineering, Who's Who in Engineering Education, International Who's Who of Professionals Who's Who in the World, The World's Most Influential Scientists: 2014; American Men and Women of Science; biography published in English, Ukrainian and Russian editions of Wikipedia

1999 UIC College of Engineering Faculty Research Award
1998 NSF CAREER Award
1999-2005 Best Poster awards from the International Metallographic Society, Electrochemical Society (2), Materials Research Society (3) and American Ceramic Society (8)
1994, 1999, 2003, 2005 Guest Professor (summer appointment), University of Limoges, France
1998, 1999, 2000 Certificates of Appreciation from Illinois Math and Sciences Academy
1995, 2004 Certificate of Appreciation from the American Ceramic Society
1993 I.N. Frantsevich Prize (the highest award in the field of Materials Science) from the Ukrainian Academy of Sciences
1987, 1990 Award for Young Scientists from the Institute for Materials Science, Kiev, Ukraine

Selected Awards to/with PhD Students

Kyle Matthews, 40 under 40 Drexel Alumni list, 2026
Marley Downes, NSF GRFP, 2024
Bilen Akuzum, 40 under 40 Drexel Alumni list, 2024
Michael Naguib, Distinguished Alumnus Award, Drexel Univ., 2023
Kathleen Maleski, 40 under 40 Drexel Alumni list, 2023
Olha Mashtalir, 40 under 40 Drexel Alumni list, 2022
Maria Lukatskays, 40 under 40 Drexel Alumni list, 2020
Mark Anayee, NSF GRFP, 2018
Kristy Jost, 40 under 40 Drexel Alumni list, 2018
Ariana Levitt, NSF GRFP, NSF 2018 Australia-Americas PhD Research Internship Program
Simge Uzun, 1st place 2018 in the Science as Art competition at MRS
Kanit Hantanasirisakul, 2017 Science as Art Award at MRS
Michael Naguib, 40 under 40 Drexel Alumni list, 2015
Davide Mattia, 40 under 40 Drexel Alumni list, 2015
Maria Lukatskaya, Graduate Student Gold Award at the MRS Spring Meeting, April 2015
Maria Lukatskaya, Best Poster Award, ECS Spring Meeting, May 2015, Hill Fellowship, 2015
Boris Dyatkin, Best Graduate Student Award, DOE EFRC Meeting, Washington, DC, October 2015
Olha Mashtalir, Best Poster Award, E-MRS meeting, France, and 6th PCGMR-NCKU Symposium in Taiwan 2014, 40 under 40 Drexel Alumni list 2022
Michael Naguib, Graduate Student Gold Award at the MRS Spring meeting, 2014;
Kelsey Hatzell - Arthur Nowick Graduate Student Award, MRS Fall meeting, 2014;
Kelsey Hatzell - Best poster Award at the ECS Fall Meeting, 2013
Katherine Van Aken - Best poster Award at the ECS Fall Meeting, 2013
Carlos Perez and Katherine Van Aken - Best poster Award at the MRS Spring meeting, 2013
Amanda Pentecost - NSF Graduate Fellowship
Riju Singhal and Yang Gao – Best poster Award at the MRS Fall meeting, 2012
Riju Singhal, Graduate Student Silver Award at the MRS Fall meeting, 2012
Kristy Jost – Graduate Student Silver Award at the MRS Fall meeting, 2012
Kristy Jost – Arthur Nowick Graduate Student Award, MRS Fall meeting, 2012
John Chmiola - NSF award to attend the European Ceramic Society meeting
John Chmiola – Drexel University Research/Service Award
Adrian Gurga – NSF Graduate Fellowship
Jameson Detweiler - NSF Fellowship - honorable mention
Pia Rossi – The Most Promising Graduating Student, Drexel University
Sebastian Osswald – Hill Fellowship
Charles Avila - NDSEG Fellowship
Thomas Juliano - NDSEG Fellowship
Goknur Cambaz – Drexel University Teaching Award (Best TA) - awarded
Ranjan Dash – Best PhD Thesis Award for Graduating students
Ranjan Dash, Gulya Korneva and Liz Hoffman – MRS graduate student awards

Michael Birnkrant, NSF and other fellowships
2nd Place in the Scanning Electron Microscopy Category, Ceramographic Competition, MS&T conference, Oct. 2011. B. Anasori, M. Naguib, Y. Gogotsi, M.W. Barsoum
Kristy Jost GRFP, NDSEG
Michael Naguib Abdelmalak George Hill, Jr. Endowed Fellowship from the College of Engineering
Sean Ozarlak, SMART finalist
Kevin Knehr, GRFP
Sebastian Osswald CARBON (Elsevier) prize for the best PhD thesis on carbon materials in the past 3 years (worldwide competition)
Elina Vitol: The best PhD Thesis in Physical Sciences, Drexel University
Stephen Niezgoda - NSF, NDSEG Fellowship
Sebastian Osswald – Hill Fellowship
John Chmiola – Excellence in Research Award
Davide Mattia - The Student with Most Promise for Enhancing Drexel's Reputation

Service to the Community

Boards

GREENCAP Advisory Board (2023-2025)
Board of Directors, Materials Research Society (2016-2019)
Oversight Committee (Board of Directors), National Technical University of Ukraine - Kyiv Polytechnic (since 2025)
Advisory Board, Yonsei University, South Korea (since 2020)
Advisory Board, Center for Smart Engineering Materials (CSEM), NYU Abu Dhabi (since 2024)
External Advisory Board of the College of Energy at Beijing University of Chemical Technology (2016-2018)

Professional Service

Nomination Committee of the Ministry of Education and Science, Ukraine, 2025
Frumkin Medal Award Selection Committee, ISE, 2025
Judge, 2025 Web of Talents STEM Award
Reviewer, Center for Advanced Materials, Qatar University, 2024
TJ Park Science Prize ($145,000), South Korea, 2024
Neutron Prize (the biggest science award in the Czech Republic), 2020-2024
Frontiers of Science and Society – Rustum Roy Lecture Award Committee, ACerS, 2023-2028
ESET Science Award (€ 100,000; the biggest science prize in Slovakia) committee, 2022
Journal of Materials Research (MRS), Editor-in-Chief selection task force, 2021
Gamow Award Selection Committee (RASA), 2021, 2024
International Union of Crystallography, Commission on Crystallography of Materials, since 2020
ECS Representative at the Science History Institute, since 2018
ACS Nano Lectureship Selection Committee, 2014
Rusnano Prize Selection Committee, 2013
Carbon Journal (Elsevier) Prize Selection Committee, 2013
The Electrochemical Society, Executive Committee member, Division of Fullerenes, Nanotubes and Carbon Nanostructures
MRS, Academic Affairs Committee, 21012-2015, Chair of the Student Chapter subcommittee
MRS Student Chapter Advisor (founding advisor) at Drexel
ECS Student Chapter Advisor (founding advisor) at Drexel
The International Institute for the Science of Sintering - Full Member
International Union of Materials Research Societies, Commission on Awards
The Electrochemical Society, Executive Committee member, Division of Fullerenes, Nanotubes and Carbon Nanostructures

Awards Committee of the Fullerenes, Nanotubes and Carbon Nanostructures Division of the Electrochemical Society, member
Department of Energy, Office of Basic Energy Sciences Electrical Energy Storage Workshop, Panel Co-Chair, April 2-5, 2007
DOE BES Workshop on Carbon Capture: Beyond 2020, panelist and report writer
National Science Board's Task Force on Unsolicited Mid-Scale Research - panelist
PA Nano Market Advisory Committee, member
Foreign Policy Association, World Leadership Forum 2009, Panel on the New Energy
Forum Committee (2010-2014) of the World Academy of Ceramics (WAC), http://www.waceramics.org
Department of Energy, Office of Basic Energy Sciences Hydrogen Storage panel, March 2007
Department of Energy, Office of Basic Energy Sciences Electrical Energy Storage Workshop, Panel Co-Chair, April 2-5, 2007
Participates in the annual Academic Reputation Survey that determines university rankings (QS, Thomson Reuters, and Times Higher Education).

Editorship

Editor or Associate Editor:

Journal of the American Chemical Society, Associate Editor, since 2026
ACS Nano, Associate Editor, November 2013 – December 2021
Carbon (Elsevier), Honorary Advisory Board, since 2016
Carbon (Elsevier), Editor, April 2007 – March 2014
Graphene and 2D Materials (Springer-Nature), Honorary Editor-in-Chief, since 2022
2D Materials (IoP), Executive Editor, since 2021
Materials Today, Honorary Editor, since 2024
Book Series Editor, *Advanced Materials and Technologies*, CRC Press/Taylor and Francis
International Journal of Applied Ceramic Technology, founding Associate Editor, 2003-2007
Science of Sintering, Regional Editor since 2005

International Editorial Board:

ACS Nano, since 2022
Advances in Applied Ceramics, since 2005
Advanced Ceramics and Glass, 1992-1993
Advanced Electronic Materials, since 2014
Advances in Technology of Materials and Materials Processing Journal (ATM), 1998-2004
Applied Ceramic Technology, since 2005
AZojomo - Journal of Materials Online, since 2005
British Ceramic Transactions, 2004-2005
C – Journal of Carbon Research (MDPI), since 2014
Cambridge Materials Energy, since 2026
Carbon Future (Tsinghua), since 2023
Carbon Innovation (Wiley), since 2025
Ceramics International (Elsevier), 2006-2010
Chemistry, Physics, and Technology of Surface, Ukraine, since 2021
Current Opinion in Solid State and Materials Science (Elsevier), since 2014
Discover Applied Sciences (Springer), 2021-2024
Electrochemical Energy Technology (De Gruyter), since 2014
Emergent Material Journal (EMJ) (Springer), since 2024
Energy Z (OAE), since 2025
eScience, (Elsevier/Nankai University), since 2022
InfoMat (Wiley), since 2019
InfoScience (Wiley), since 2022
Journal of Materials Science and Technology (JMST), since 2025

Journal of Materials Processing and Manufacturing Science, 1997-2002
Materials Physics and Mechanics (IPME), 2000-2022
MRS Bulletin, since 2020
New Materials, Compounds and Applications, Jomard Publishing and Baku State Univ., since 2017
Nano Energy (Elsevier), since 2011
Nano Trends (Elsevier), since 2022
Nanoenergy Technologies and Materials, since 2015
Nanomaterials and the Environment (Versita), 2012-2015
National Science Review (NSR), Oxford journals and CAS, since 2015
New Carbon Materials (Elsevier), since 2009
Problems of Strength (Springer), since 2022
Proceedings of KPI (*Научные вести КПИ*), Ukraine, since 2010
Recent Patents in Nanotechnology, 2007-2010
Reviews and Advances in Chemistry, since 2020
Reviews in Advanced Materials Science (DeGruiter), 1999-2022
Russian Journal of Electrochemistry, 2016-2022
Science of Nanoscale Materials (Наноструктурное материаловедение), Ukraine, since 2005

Guest editor:

Focus Issue on MXenes for Biomedical and Energy Applications, *Nanoscale*, 2024
Focus Issue on MXenes, *Small*, 2024
Focus issue of *2D Materials*, 2023
Virtual Issue of *ACS Nano*, 2021
Virtual Issue of *Advanced Materials*, 2021
Special Issue of *Advanced Functional Materials*, 2020
Special Issue of *Chinese Chemical Letters*, 2020
Special Issue of *Journal of Materials Processing and Manufacturing Science* on Carbides, Nitrides and Borides, Vol. **6**, #4, 1998
International Journal of Applied Ceramic Technology, special issues on nanomaterials, v. 1, 2004; v. 3, 2006
Focus Issue on Materials for Electrical Energy Storage*, Journal of Materials Research*, August 2010
Focus Collection on Supercapacitors, *Nanotechnology*, 2015

Conference Organizer

Director/Chair:

4th International Conference on MXenes, University of Chicago, Chicago, IL (2026)
Chair, Gordon Conference on Nanomaterials for Applications in Energy Technology, Ventura Beach, CA (2025)
3rd International Conference on MXenes, Drexel University, Philadelphia, PA (2024)
Vice-chair, Gordon Conference on Nanomaterials for Applications in Energy Technology, Ventura Beach, CA (2023)
Chair of the Scientific Committee, YUCOMAT – 23rd Annual Conference on Materials Science (2022-2026)
2nd International Conference on MXenes, Drexel University, Philadelphia, PA (2022)
3rd International Conference on MXenes, Ningbo, China (2020)
MXene 2020 Virtual Conference, Philadelphia, PA (2020)
Vice-chair, Gordon Research Conference on Nanomaterials for Applications in Energy Technology, Ventura, CA (2019)
Beilstein Nanotechnology Symposium, MXene at the Frontier of the 2D Materials World, Mannheim, Germany (2019)
2nd International Conference on MXenes, Beijing, China (2019)

6th International Conference "Novel Functional Carbon Nanomaterials" at CIMTEC 2018, Perugia, Italy (2018)
1st International Conference on MXenes for Energy Applications, Changchun, China (2018)
NATO ARW on Nanostructured Materials and Coatings, Kiev, Ukraine (2002)
NATO ASI on Materials Science of Carbides, Nitrides and Borides, St. Petersburg, Russia (1998)
Symposium on Material Challenges in Electrical Energy Storage, Materials Research Society Fall Meeting, November-December 2009

Co-Director/Co-Chair:
Workshop on Hysteresis, Metastability and Aftereffect, Chicago, IL (2000)
20th Technical Conference of the American Society for Composites, Philadelphia, PA (2005)
Conference on Nanomaterials of CIMTEC 2010, 12th International Ceramics Congress, Italy (2010)
CIMTEC 2014

Panel Co-Chair: DOE Workshop on Basic Research Needs for Electrical Energy Storage, 2007

Symposium/Session Organizer or Member of the Organizing Committee:
Chaired and/or organized about 200 sessions at professional society and other meetings. Organized numerous symposia at the Materials Research Society, Electrochemical Society, and American Ceramic Society meetings.
Selected conferences in the past 20 years:
Co-Organizer, MXenes: US-based Nanomaterials of the Century. Government workshop in conjunction with ACS Spring 2024 Meeting, Tulane University, New Orleans, LA, March 19, 2024
Co-Organizer, Nanotubes and low-dimensional materials NT'23, June 4-9, 2023, Arcachon, France.
Organizing Committee member, 7th Samsonov Conference in Kyiv: Symposium C: Low-dimensional nanostructures of refractory compounds, May 25-28, 2021, Kyiv, Ukraine.
Organizing Committee member, The International Conference on Ceramic Processing Science (ICCPS-13), May 8-11, 2016 in Nara, Japan.
International Advisory Committee, 2016 International Conference on Advanced Capacitors (ICAC2016), Otsu Prince Hotel, Otsu, Shiga, Japan, May 23 – 27, 2016.
Symposium Organizer, CARBON 2016, State College, PA, July 2016
Organizer of the Topic E3 -- Electrochemical capacitors and renewable fuels, International Conference on Innovative Electrochemical Energy Materials and Technologies (EEMT2015), November 8th to 11th, 2015, Nanning, China.
Co-chair of Symposium 2: Energy storage and hybridized cells, Nanoenergy and Nanosystems (NENS) conference, Beijing, Dec. 8-10, 2014
Symposium Chair, CIMTEC 2014, Montecatini Terme, Italy, June 16-20, 2014
Symposium Co-chair, NANO 2014, Moscow, Russia, July 2014
Symposium co-organizer, De Novo Carbon Nanomaterials II Symposium, 2014 MRS Spring Meeting, San Francisco, CA, April 20-25, 2014
International Advisory Board, 5th International Conference on Carbon for Energy Storage/Conversion and Environment Protection (CESEP´13), Mülheim a.d. Ruhr, Germany, September 22-27, 2013
Program Committee, NanoBioPhysics-2013, Kharkov, Ukraine, October 7-10, 2013
De Novo Carbon Nanomaterials II Symposium, 2014 MRS Spring Meeting, San Francisco, CA
International Advisory Board, 2013 International Conference on Advanced Capacitors (ICAC2013), Osaka, Japan from May 27 – 30, 2013.
Scientific Committee, The 3rd International Symposium on Enhanced Electrochemical Capacitors – ISEECap 2013, Taormina (Italy) on June 3-7, 2013.
International Organization Committee of the International Conference on Ceramic Processing Science 12. August 4-7, 2013 in Portland, Oregon.
Technical Program Committee for CARBON 2013, Rio de Janeiro, Brazil, July 14-19, 2013.
International Advisory Board, 5th International Conference on Carbon for Energy Storage/Conversion

and Environment Protection (CESEP´13), Mülheim a.d. Ruhr, Germany, September 22-27, 2013.
Program Committee, NanoBioPhysics-2013, Kharkov, Ukraine, October 7-10, 2013.
International Advisory Committee member, Session Chair, Annual World Conference on Carbon, Krakow, Poland, June 17th to 22nd, 2012.
International Scientific Committee member, Second International Conference "Nanomaterials: Applications & Properties", Alushta, Ukraine, 24-29 September, 2012
Program Committee, Int. Conf. on Diamond and Carbon Materials. Organizer of a Focused Session on Detonation Nanodiamond: Properties and Applications, Granada, Spain, Sept. 3-7, 2012
Organizing Committee, 12th Asian Bio-Ceramics Symposium (ABC 2012), National Cheng Kung University, Tainan, Taiwan, Nov. 18-21, 2012.
Organizing Committee, 4th PCGMR-NCKU symposium on Nano-Technology/Materials for Bio-Medical Applications, Tainan, Taiwan, Nov. 21-23, 2012
Technical Program Committee for CARBON 2013, to be held in *Rio de Janeiro*, Brazil, July 14-19, 2013.
Co-Chair, Conference on Nanomaterials of CIMTEC 2010,
International Advisory Board of the 2nd International Conference “Disclosing Materials at Nanoscale” of the 12th International Ceramics Congress (Italy, June 6-11, 2010)
Session Organizer, Nanotube Devices and Applications, The Electrochemcial Society Meeeting, Montreal, 2011
International Advisory Committee, 2nd International Symposium on Enhanced Electrochemical Capacitors (ISEECap’11)
International Advisory Committee, Recent Advances In Fluid Mechanics, Heat & Mass Transfer and Biology, 8th WSEAS International Conference on FLUID MECHANICS (FM '11), Puerto Morelos, Mexico January 29-31, 2011
International Advisory Committee, CARBON 2011, The Annual World Conference on Carbon, Shanghai, July 25-19, 2011
Co-Organizer, Carbon Materials for Energy Storage and Generation workshop, Shanghai, 24th July, 2011
Lead Organizer, Symposium on Materials Challenges Facing Electrical Energy Storage (Symposium U) at the Fall MRS Meeting, Boston, MA, Dec. 2009.
Co-Chair, Conference on Nanomaterials of CIMTEC 2010,
International Advisory Board of the 2nd International Conference “Disclosing Materials at Nanoscale” of the 12th International Ceramics Congress (Italy, June 6-11, 2010)
Symposium co-organizer, 33rd International Cocoa Beach Conference on Advanced Ceramics and Composites, Symposium: Porous Ceramics**:** Novel Developments and Applications. Daytona Beach, FL, January 2009
215th Electrochemical Society meeting, San Francisco, May 24-29, 2009
H4-Carbon Nanotubes and Nanostructures: Applications and Devices
(Fullerenes, Nanotubes, and Carbon Nanostructures)
Organizers: S. Rotkin and Y. Gogotsi
International Advisory Committee of the 5th International Workshop "Characterization of Porous Materials: from Angstroms to Millimeters", Rutgers University, New Brunswick, NJ, June 24-26, 2009.
International Scientific Committee, 1st International Symposium on Enhanced Electrochemical Capacitors (1st ISEE’Cap), Nantes, France, June 29 – July 2, 2009
4th China Medical Biotech ForumTheme: Translating Bio-Innovations into Industrialization, August 21-23, 2009, Venue: Dalian, China
Sept. 2-6, 2007 - Krakow, Poland. Carbon for Energy Storage and Environment Protection Conference, Session Chair
Sept. 9-14, 2007 - Berlin, Germany. 18th European Conference on Diamond, Diamond-Like Materials, Carbon Nanotubes, and Nitrides, Session Chair
Symposium co-chair, Nanostructured and Multifunctional Materials, 7th Pacific Rim Conference on Ceramic and Glass Technology, Shanghai, China, November 11-14, 2007
Symposium co-organizer, 32nd International Cocoa Beach Conference on Advanced Ceramics and Composites, Symposium 9: Porous Ceramics. Daytona Beach, January 2008

International Advisory Board, 2nd International Congress on Ceramics, Verona, Italy, June 29-July 4, 2008
Co-organizer, 20th American Society of Composite Meeting, Philadelphia, PA, Sept. 2005
Member of International Program Committee, International conference "Modern Materials Science: Achievements and Problems" Kiev, Ukraine, September 26—30, 2005
Co-organizer of a Symposium at the 2006 Spring American Chemical Society National Meeting in Atlanta.
Advisory Board, Disclosing Materials at Nanoscale Symposium at CIMTEC 2006, Italy
Symposium Organizer, Fall Materials Research Society Meeting, Symposium T, Surface Engineering, Dec. 2004
Member of the Steering Committee - Pennsylvania Nanotechnology 2005, Pittsburg, April 19-21, 2005
Symposium Organizer, Symposium on Nanostructured and Biomimetic Materials, Cocoa Beach Meeting on Advanced Materials, Cocoa Beach, January 2005
Co-organizer, 20th American Society of Composite Meeting, Philadelphia, PA, Sept. 2005
Organizing Committee member, 3rd International Conference on Materials and Coatings for Extreme Performances: Investigations, Applications, Ecologically Safe Technologies and Their Production and Utilization, Crimea, Ukraine, 13-17 Sept. 2004
Member of International Program Committee, International conference "Modern Materials Science: Achievements and Problems" Kiev, Ukraine, September 26—30, 2005
Organizing Committee Member, E-MRS 2003 Spring Meeting. Jun 10-13, 2003, Strasbourg, France.
Member of the Steering Committee - Pennsylvania Nanotechnology 2002, Harrisburg, Oct. 3-4, 2002
Symposium Organizer, American Ceramic Society Meeting, Nashville, TN, May 2003
Organizing Committee Member, NATO-ARW on Frontiers in Molecular-Scale Science and Technology of Nanocarbon, Nanosilicon and Biopolymer Integrated Nanosystems, July 12-16, 2003, Ilmenau, Germany

Drexel University Committees
MSE Faculty Search Committee 2023
COE Dean Search Committee 2017
Director, A.J. Drexel Nanomaterials Institute, Since Jan 2014
Founding Director, A.J. Drexel Nanotechnology Institute, March 2003-Dec. 2013
Tenure and Promotion Committee, COE, member
Energy and Environment Task Force, member
Drexel University Strategic Plan Initiative 3 (Global Impact), member
Prof. Cameron Abrams, Promotion Committee, CBE Department, member
Prof. Jack Zhou, Promotion Committee, MEM, member
Prof. C.Y. Li, Promotion Committee, MSE Department, chair
Prof. Minjun Kim, Promotion and Tenure Committee, MEM, member
Prof. M. Taheri, Mid-tenure review committee, member
Tenure and Promotion Committee, COE
Strategic Planning Phase 1 Research Task Force, Drexel University, member
VP for Research Search Committee, member
Prof. M. Marcolongo Promotion Committee (Full Professor), MSE Department, member
Prof. V. Genis, Promotion Committee (Full Professor), Goodwin College, member
Prof. U. Wegst, Chair, Mid-tenure review committee
College of Engineering Research Committee, member
Dean's Advisory Committee, member
VP for Research Search Committee, University, member
COE Promotion and Tenure Committee, member AY 2008/2009
VP for Research Search Committee, member

Other Professional Activities

Acted as reviewer:
Nature
Nature Communications
Nature Chemistry
Nature Electronics
Nature Energy
Nature Materials
Nature Nanotechnology
Nature Synthesis
Nature Physics
Science
Science Advances
ACS Applied Materials and Interfaces
ACS Nano
Advanced Materials
Advanced Electronic Materials
Advanced Energy Materials
Advanced Functional Materials
Angewandte Chemie
Applied Physics Letters
Applied Surface Science
British Ceramic Transactions
Carbon
Ceramic Engineering & Science Proceedings
Ceramics International
Diamond and Related Materials
Electrochemical and Solid State Letters
Electrochimica Acta
Graphene and 2D Materials
International Journal of Powder Metallurgy
International Journal of Applied Ceramic Technology
J. Alloys and Compounds
J. American Ceramic Society
J. American Chemical Society
J. Applied Physics
J. European Ceramic Society
J. Electrochemical Society
J. Engineering Materials and Technology (ASME)
J. Materials Chemistry
J. Materials Processing and Manufacturing Science
J. Materials Research
J. Materials Science
J. Nanoscience and Nanotechnology
J. Physics: Condensed Matter
J. Physical Chemistry, B
J. Power Sources
J. Raman Spectroscopy
Langmuir
Materials Today
Mendeleev Communications
Microscopy-Microanalysis-Microstructures

Nano Energy
Nano Letters
Nano Today
Nanotechnology
Physical Review Letters
Refractories (Ogneupory)
Science of Sintering
Scientific Reports (Nature)
Sensors and Actuators
Solid State Ionics
Surface Science
2D Materials
2D
and other journals and conference proceedings

Reviewer of research proposals or panelist for:
Alexander von Humboldt Foundation
AFOSR
Army Research Office
Center for Advanced Materials, Qatar University, 2024
City University of New York Foundation
CNRS (France)
Department of Energy (DOE)
Department of State
DFG (Germany)
DTRA
Engineering and Physical Sciences Research Council, UK
EPSCOR Foundation
Estonian Science Foundation
European Research Council (ERC)
Frontiers of Science and Society – Rustum Roy Lecture Award Committee, ACerS, 2023-2028
Global Climate and Energy Project at Stanford University
GREENCAP, External Advisory Board
International Society of Electrochemistry Frumkin Medal Award Selection Committee, 2025
National Research Council (NRC)
National Science Foundation (NSF)
Norwegian Research Council
Petroleum Research Fund
Research Grants Council, Hong Kong
Science and Technology Center, Ukraine (STCU)
US Civilian Research and Development Foundation (CRDF)
U.S.-Israel Binational Science Foundation, Israel
WISE Visiting Professor, Linköping University, Sweden (since 2023)
W.M. Keck Foundation

Abstracter:
Ceramic Abstracts (1990-1994)

Professional Society Membership:
American Association for Advancement of Science, **Fellow**
American Ceramic Society, **Fellow, Life-Long member**
American Chemical Society

ASM International
The Electrochemical Society, **Fellow**
International Institute for the Science of Sintering, elected **Full Member**
The International Society of Electrochemistry, **Fellow**
Japan Society for Promotion of Science Alumni Association
Materials Research Society, **Fellow, Director**
NANOSMAT Society, **Fellow**
National Association of Inventors, **Fellow**
RASA-America, **Honorary Life-long Member**
Royal Society of Chemistry, **Fellow**
World Academy of Ceramics, **Academician**
World Innovation Foundation, **Fellow**

Selected Plenary, Invited, and Keynote Lectures and Seminars

Conferences

More than 400 plenary, keynote, and invited talks.
ChinaNANO 2025, the 10th International Conference on Nanoscience & Technology, China, August 30, 2025 (Opening Plenary)
6th KAIST Emerging Materials Symposium, Korea, August 26, 2025 (Invited)
NanoTexnology, Thessaloniki, Greece, July 5-12, 2025 (Plenary)
RamanFest 2025, Frankfurt, Germany, July 3, 2025 (Keynote)
3rd International Conference on Advanced Functional Materials & Devices (AFMD-2025) for Sustainable Development in India, March 5, 2025 (Keynote)
I2DM Summit 2024, Abu Dhabi, United Arab Emirates, November 25-28, 2024 (Keynote)
XPANSE, Abu Dhabi, United Arab Emirates, November 20-22, 2024 (Keynote)
International Conference on Advances in Carbon Science and Innovation (ICACSI 2024), Sydney, Australia, November 11-13, 2024 (Plenary)
5th International MXene Conference in China, October 18, 2024 (Opening Plenary)
E-MRS, Warsaw University of Technology, Poland, September 16-19, 2024 (Opening Invited)
IEEP NAP-2024 Riga, Latvia, September 9, 2024 (Plenary)
YUCOMAT, Herzog Novi, Montenegro, September 2-6, 2024 (Plenary)
MXene: Changing the World, the 3rd International MXene Conference at Drexel University, Philadelphia, PA, August 5-7, 2024 (Plenary)
EuroMXene, Valencia, Spain, Jun 26, 2024 (Plenary)
ICMCTF 50th Anniversary Meeting, San Diego, CA, May 19-24, 2024 (Plenary)
STARMUS Festival, Bratislava, Slovakia, May 13-15, 2024 (Invited Lecture as Doctor Honoris Causa of the Slovak Academy)
MRS Spring Meeting & Exhibit, Seattle, WA, April 22-24, 2024 (MRS Communications Award Lecture)
International Conference on Sustainable Nanomaterials Integration & Organization for Energy and Environment (iSNIOE2) 2024, India, March 22, 2024 (Plenary)
ACS MEA, NYU Abu Dhabi, United Arab Emirates, February 5, 2024 (Keynote)
Membrane Deslaination 2023 (MEMDES2023): 6th International Conference on Desalination using Membrane Technology, Sitges, Spain, November 19-22, 2023 (Keynote)
Materials for Tomorrow 2023 Chalmers University, Göteborg, Sweden, November 8-10, 2023 (Plenary)
New Frontiers of Natural Sciences: 2nd International Selçuk Meeting, Selçuk University, Konya, Turkey, October 2, 2023 (Keynote)
IEEE NAP, Bratislava, Slovakia, September 11, 2023 (Plenary)
E-MRS Fall Meeting, Warsaw, Poland, September 18-21, 2023 (Czochralski Award Recipient Lecture)
YUCOMAT, Herceg Novi, Montenegro, September 4-8, 2023 (Keynote)
ISICXXI: 21st International Symposium on Intercalation Compounds, Nancy, France, June 11-15, 2023 (Plenary)

Korea Society of Industrial and Engineering Chemistry (KSIEC), Seoul, South Korea, May 12, 2023, Special MXene session (Keynote)
8th National Conference on Energy Storage Science and Technology, Jilin University, virtual, April 7, 2023, (Plenary)
1st International Conference on Emerging Materials for Sustainable Energy and Environment (EMSEE 2022), Dec. 13-15, 2022 (Keynote)
6th International Conference on Active Materials and Soft Mechatronics (AMSM), Atlanta, GA, October 27, 2022 (Plenary)
MS&T Meeting, Pittsburgh ACerS Frontiers of Science and Society, Oct. 11, 2022, Rustum Roy Award Lecture
Hong Kong Tech Forum on Carbon Neutrality and Sustainable Environment, Oct. 5, 2022 (Keynote)
DGM's Materials Science and Engineering Congress 2022, Darmstadt, Germany, Sept. 27, 2022 (plenary)
IEEE NAP-2022 CONFERENCE, Poland. September 12, 2022 (Plenary)
Sede Boqer Symposium on Solar Electricity Production, Ben Gurion University, Israel, Sept. 6, 2022 (keynote)
International Symposium on Enhanced Electrochemical Capacitors, ISEECap 2022, July 14, 2022 (Plenary)
Graphene 2022, Germany, July 5, 2022 (Keynote)
CIMTEC Perugia, Italy, June 27, 2022 (Plenary)
College de France, Invited Lecture, February 21, 2022
Nanocon 2021, Brno, Czech Republic, October 20, 2021 (Plenary)
Printing for Fabrication and ICAI 2021 – October 11, 2021 (Keynote) Speaker
2021 IEEE 11th International Conference on Nanomaterials: Application & Properties, Sept. 6, 2021 (Plenary)
72nd Annual Meeting of ISE, Aug 29-Sept. 3, 2021 (Keynote)
Horizons Energy Storage and Conversions, Aug. 4, 2021 (Plenary)
SE-MAT Int'l Meeting 2021, Aug. 8, 2021 (Keynote)
IVS Students Conference, July 15, 2021 (Plenary)
WNCST 2021, March 8-13, 2021 (Plenary)
Virtual Conference on Global Renewable Energy Researchers Meet, May 7-8, 2021 (Plenary)
7th Samsonov Conference in Kyiv, May 25-28, 2021 (Keynote)
International Conference on Nanoscience and Nanotechnology (ICONN-2021), February 2, 2021 (Keynote)
Int. Conf. "Nanotechnology and nanomaterials" (NANO-2020), Lviv, Ukraine, August 26, 2020 (Keynote)
1st International Virtual Conference on Advances in Colloidal and Polymeric Systems (ACAPS-2020), August 22, 2020 (Keynote)
Center for Nanophase Materials Sciences Virtual Users Meeting, August 10, 2020 (Plenary)
Graphene 2020 Online Forum, Shenzhen, China, July 4, 2020 (Plenary)
Online Conference on Green Energy, July 20, 2020 (Plenary)
Center for Nanophase Materials Sciences Virtual Users Meeting, August 10, 2020 (Plenary)
Graphene 2020 Online Forum, Shenzhen, China, July 4, 2020 (Plenary)
Int. Virtual Conference on Advanced Nanomaterials & Applications, Vellore, India, June 18, 2020 (Plenary)
Graphene Flagship: Graphene for Energy Storage Applications, June 17, 2019 (Keynote and Panelist)
2nd Int. Conf. on Nanoscience and Nanotechnology, Vellore Institute of Technology, India, Nov. 29 - Dec. 1, 2019 (Plenary)
Congress of the Mexican Carbon Association, San Luis Potosi, Mexico, November 5, 2019 (Plenary)
Graphene Week, Helsinki, Finland, September 23 - September 27, 2019 (Plenary)
7th Dresden Nanoanaysis Symposium, Dresden, Germany, August 30, 2019 (Keynote)
ChinaNano Conference, Beijing, China, August 17 – 20, 2019 (Keynote)
Energy Frontier Research Centers PI's Meeting, Washington, D.C., July 29 - 30, 2019, (Talk)
70th Annual Meeting of the International Society of Electrochemistry, Durban, South Africa, Aug. 5-9, 2019 (Keynote)
NANO KOREA, South Korea, July 2 – 4, 2019 (Keynote)
Int. Symposium on Enhanced Electrochemical Capacitors, ISEECap, Nantes, France, May 5-8, 2019 (Plenary)
2nd International Conference on MXenes, Beijing, China, May 10-12, 2019 (Plenary)
2nd Int. Conference on Materials Strength and Applied Mechanics, Kiev, Ukraine, May 27-28, 2019 (Keynote)
6th International Conf. of Multifunctional, Hybrid and Nanomaterials, Sitges, Spain, March 12, 2019 (Plenary)
NREL/MINES/NIST, Colorado School of Mines, Feb 21, 2019 (Distinguished Lecture)
Graphene for US, New York, NY, Feb. 14, 2019 (Keynote)

India Nano 2018, Bengaluru, India, Dec. 8, 2018 (Plenary)
9th International Symposium of Global Research and Development Centers, Seoul, South Korea Nov. 7-9, 2018 (Plenary)
OSA's Int. Photonics and Optoelectronics Meeting (POEM), Wuhan, China, Oct. 31-Nov. 1, 2018 (Plenary)
InScience 2018, Science and Innovation Conference, Kieve, Ukraine, Sept. 13, 2018 (Plenary)
IEEE 8th International Conference on Nanomaterials: Applications and Properties, Zatoka, Ukraine, Presentation regarding raising money for research in the US at the Future of Ukraine Science & Education: Roundtable and International Networking Workshop (9/9), Sept. 8-12, 2018 (Plenary)
Gordon Research Conference (GRC) on Ceramics, South Hadley, MA, August 14-17, 2018 (lecturer)
Chemical Heritage Foundation workshop on New Energy Storage Technologies for Enabling Renewables, January 11, 2018, Philadelphia, PA (organizer and lecturer)
10th Anniversary Workshop on Liquid Phase Epitaxy, Trinity College, Dublin, Ireland, August 1-2, 2018 (Plenary)
Organic Functional Materials and Electronics: Synthesis and Devices, Tianjin, Nankai University, July 13-15, 2018 (Keynote)
CARBON 2018 (The World Conference on Carbon), Madrid, Spain, June 30-July 4, 2018 (Plenary)
Graphene 2018, Dresden Germany, June 26-29, 2018 (Invited)
ICREN 2018 (International Conference on Renewable Energy), Barcelona, Spain, April 25-27, 2018 (plenary)
Gordon Research Conference on Batteries, Ventura, CA, Feb. 28 - March 2, 2018 (lecturer)
Carbon Nanomaterials in Aqueous Environment Workshop, Berlin, Germany, February 21-23, 2018 (Invited)
3rd Energy Futures Conference, Sydney, Australia, February 3-9, 2018 (Plenary)
US-Czech Conference on Nanotechnology and Chemistry, Jan 17-18, 2018 (Keynote)The First International Conference on Energy Storage Materials, November 18-21, 2017, Shenzhen, China (Keynote and Award Lecture)
3rd International Conference on Advances in Functional Materials, University of California, Los Angeles, CA, USA, Aug. 14-17, 2017 (plenary)
5th International Symposium on Enhanced Electrochemical Capacitors, Jena, Germany, July 10–14, 2017 (plenary)
ICMAT 2017, Singapore, June 18-23, 2017 (plenary)
The 4th International Forum on Graphene, Shenzhen, China, April 9-12, 2017 (plenary)
1st Africa Energy Materials Conference, Pretoria, South Africa, March 28-31, 2017 (plenary)
Gordon Research Conference on Nanomaterials for Applications in Energy Technology, Ventura Beach, CA, Feb. 26- March 3, 2017
5th International Solvothermal and Hydrothermal Association Conference, January 17-20, 2016 (plenary)
Daytona Beach, Nanostructures and 2D Materials Symposium, January 24 – 29, 2016
AIMR International Symposium, Sendai, Japan, February 22, 2016
ACS Meeting, San Diego, CA, March 12-15, 2016
MRS Meeting, Phoenix, AZ, March 28-April 1, 2016
Graphene 2016, Genoa, Italy April 19 – 21,2016 (Plenary)
13th Int. Conference on Ceramic Processing Science (ICCPS-13), Nara, Japan, May 8-11, 2016 (plenary)
2016 International Conference on Advanced Capacitors (ICAC2016), May 22-18, Shinga, Japan (keynote)
229th ECS Meeting, San Diego, CA, May 29 – 31 (Plenary)
Nature Conference on Materials for Energy 2016, Wuhan, China, June 11-14, 2016
Nano Energy & Nano Science Meeting, Beijing, China, July 14-16, 2016
International Materials Research Congress, 2016, Cancun, Mexico, Aug. 14-21, 2016
ACS Meeting, Philadelphia PA, Aug. 21-25, 2016
International NanoBioTechnology Symposium, Sept. 10-11, 2105. Koycegiz, Mugla, Turkey (Keynote)
mESC-IS, Sept. 7-9, 2015Ankara, Turkey (Plenary)
CESEP 2015, Poznan, Poland, Oct 19- 22, 2015 (plenary)
Symposium on Capacitors at the 66th International Society for Electrochemistry (ISE) Meeting, Taipei, Taiwan, Oct. 5-8, 2015 (keynote)
1st International Symposium on Energy Chemistry and Materials, Shanghai, China, Oct. 29-31, 2016 (plenary)
International Conference on Innovative Electrochemical Energy Materials and Technologies, Nanning, China, Nov. 8-11, 2015 (Plenary)
MRS Fall Meeting 2015, Nov 30, 2015 to Dec 4, 2015, Boston, MA (Symposium (MM): Advances in Flexible

Devices for Energy Conversion and Storage (Invited)
Institute of Metal Research, IMR-CAS, Nov 4, 2015 to Nov 7, 2015, Shenyang, China (Lee Hsun Award Lecture on Materials Science)
PacifiChem, Honolulu, HI, Dec 14 – 19, 2015 (Invited)
5th International Solvothermal and Hydrothermal Association Conference, January 17-20, 2016 (plenary)
CESEP 2015, Poznan, Poland, Oct 19- 22, 2015 (Plenary)
Symposium on Capacitors at the 66th International Society for Electrochemistry (ISE) Meeting, Taipei, Taiwan, Oct. 5-8, 2015 (keynote)
Keynote lecture at the International NanoBioTechnology Symposium, Sept. 10-11, 2105. Koycegiz, Mugla, Turkey
mESC-IS, Sept. 7-9, 2015Ankara, Turkey (plenary)
8th International Conference on Materials for Advanced Technologies (ICMAT2015) and 16th IUMRS-ICA, Singapore, July 2, 2015 (Invited)
ISEECap conference, Montpellier, France, June 7-11, 2015
TechConnect World Innovation Conference, June 15, 2015
Argonne National Laboratory, Advanced Photon Source APS/CNM Users Meeting, May 12, 2015
CARBON 2015, Dresden
Advanced Membrane Technology VI: Water, Energy, and New Frontiers, February 8-13, 2015, Sicily, Italy
Nanoenergy and Nanosystems, NENS 2014, Beijing, Dec. 8-10, 2014 (invited)
Qatar Foundation Annual Research Conference, Doha, November 18-19, 2014NEST Workshop on Nanowires for Energy Storage, Frankfurt, Oct. 14-15, 2014 (invited)
248th ACS National Meeting that will be held in San Francisco, California, August 10-14, 2014.
6th International Symposium of Functional Materials, Singapore, Aug. 4-7, 2014 (plenary)
Symposium Ion Dynamics in Confined Systems, University of Cambridge. July 9, 2014 (invited)
Faraday Discussions 172: Carbon in Electrochemistry, July 2014, Sheffield, UK
Spring Materials Research Society Meeting, San Francisco, CA, April 2014 (**Fred Kavli Lecture**)
Power our Future 2014, Vitoria, Spain, April 1-4, 2014
American Chemical Society Meeting, Dallas, TX, March 2014
2014 TMS Annual Meeting & Exhibition, February 20, 2014, San Diego, CA
Asia-Pacific Conference on Energy Storage and Conversion, Brisbane, Australia, Feb. 2014 (plenary)
3rd International Materials Research Congress, Cancun, Mexico, Aug. 2013 (plenary)
Fall Materials Research Society Meeting, Boston, MA, Dec. 2013`
Flatlands beyond Graphene, Jacobs University, Bremen, June 17 - 21, 2013
ABC, ECCAP Symposium, June 25-26, Strasburg, 2013
International Materials Research Congress (IMRC-2013), Cancun, Mexico, August 11-16, 2013 (plenary)
International Conference on Advanced Capacitors, May 27 - 30, 2013, Osaka, Japan (Plenary)
2013 TMS Annual Meeting & Exhibition, March 3-7, 2013, San Antonio, TX
223rd ECS Meeting, Toronto May 12-17, 2013
NSF Workshop on Emerging Research in Ceramics, Carbon, Glasses and Composites, March 19, 2012
2010 Gordon Research Conference on Solid State Studies in Ceramics: Fundamental Phenomena in NANOSMAT, Krakow, Poland, Oct. 18-22, 2011 (NANOSMAT Award Lecture)
TACT 2011 International Thin Films Conference, Kenting, Taiwan, Nov. 21-23, 2011 (keynote)
Energy Applications, Colby Sawyer College, New London, NH, 15-20 August 2010
4th International Conference on Polymer Batteries and Fuel Cells, Yokohama, Japan, 2009
US-Korea Conference (UKC) 2009 on Global Sustainability, Raileigh, NC, July 16-19, 2009
ISEE'Cap09, First International Symposium on Enhanced Electrochemical Capacitors, Nantes, France, 29th June – 02nd July 2009
CARBON'09, The Annual World Conference on Carbon, Biarritz, France, June 14-19, 2009 (Keynote)
RUSNANOTECH, Moscow, Dec. 2-6, 2008
EPRI Workshop on Materials for Next Generation Energy Storage, Cleveland, OH, October 20-21, 2008
Michigan State University, June 2008
Electrochemical Society Meeting, Phoenix, AZ, May 2008
DOE workshop on Scientific Impacts and Opportunities in Computing, Maui, HI, Jan. 2008
Carbon for Energy Storage and Environment Protection Conference, Krakow, Poland, Sept. 2007

18th European Conference on Diamond, Diamond-Like Materials, Carbon Nanotubes, and Nitrides, Berlin, Germany, Sept. 2007
NATO Advanced Study Institute (ASI) on Plasma Assisted Decontamination of Biological and Chemical Agents, Izmir, Turkey, Sept. 2007
7th Pacific Rim Conference on Ceramic and Glass Technology, Shanghai, China, Nov. 2007
National Nano Engineering Conference (**Award Lecture**), Boston, November 2006
231st American Chemical Society National Meeting, Atlanta, GA, March, 2006
Materials Research Society Fall Meeting, December 2005
European Ceramic Society Meeting, Portoroz, Slovenia, June 2005
NATO ASI on Nanostructured and Advanced Materials for Optoelectronic, Photovoltaic and Sensor Applications, Sozopol, Bulgaria, September 2004
228th American Chemical Society National Meeting, Philadelphia, PA, August, 2004
XIII International Materials Congress, Cancun, Mexico, August 2004
11th International Symposium on Advanced Materials: Frontiers of Nano-technology and Colloidal Chemistry, Tokyo, Japan, March 2004
NATO ARW on Ultra-Nano-Crystalline Diamond, St. Petersburg, Russia, June 2004
High Temperature Corrosion Symposium, Les Embiez, France, May 2004
28th International Cocoa Beach Conference on Advanced Ceramics and Composites, Cocoa Beach, FL, January, 2004
IUMRS-ICAM Meeting, Yokohama, Japan, October 2003
American Ceramic Society 105th Annual Meeting, Nashville, TN, April 2003
XII International Materials Research Congress, Cancun, Mexico, August 2003
Symposium on Nanoscale Material Behavior and Modeling at the 2002 International Mechanical Engineering Congress New Orleans, LA, November 2002
XI International Materials Research Congress, Cancun, Mexico, August 2002
201st Meeting of The Electrochemical Society, Philadelphia, PA, May 2002
International Conference on Metallurgical Coatings and Thin Films, San Diego, CA, April 2002
4th Pacific Rim Conference on Advanced Materials, Maui, HI, November 2001
5th International Nanoceramics/Crystals Conference, Seoul, Korea, May 2001
International Conference on Soft Solution Processing, Tokyo, Japan, December 2000
Joint Sixth International Symposium on Hydrothermal Reactions & Fourth International Conference on Solvo-Thermal Reactions, Japan, July 2000
NATO ASI on Functional Gradient Materials and Surface Layers Prepared by Fine Particle Technology, Kiev, Ukraine, June 2000
International Workshop on Interface Controlled Materials, St. Petersburg, Russia, June 2000
High Temperature Corrosion Symposium, Les Embiez, France, May 2000
International Workshop on Solvothermal Synthesis of Ceramics, Yokohama, Japan, February 2000
NATO ARW on Nanostructured Films and Coatings, Santorini, Greece, July 1999
International Symposium on Carbon, Tokyo, Japan, November 10, 1998
World Ceramic Congress, Florence, Italy, June 15, 1998
Innovations in Materials Conference, Washington, DC, 1998
28th Annual Meeting of the Fine Particle Society, Dallas, TX, April 3, 1998
Diamond Science and Technology Conference, La Jolla, CA, 1998
The Electrochemical Society Meeting, San Diego, CA, 1998
NATO ARW on Multilayered and Fiber-Reinforced Composites, Kiev, Ukraine, June 1997

Selected seminars

iCANX talk, China/virtual, August 22, 2025
Ukrainian State University of Science and Technology, Dnipro, Ukraine, May 14, 2025
MSE Seminar, UC Berkeley, April 4, 2025
Penn State, February 4, 2025
NJIT – Marino Xanthos Memorial Lecture, October 9, 2024
MIT, October 4, 2024
Linköping University, Switzerland, June 21, 2024
Purdue University, April 2, 2024

UCLA, February 12-13, 2024
The Science History Institute, Philadelphia, November 30, 2023
Seminar at Linköping University and PhD Committee (Official Opponent) at Linköping University, Sweden, November 17-18, 2023
Technical University of Vienna, Sept. 2023
Technical University of Warsaw, Sept. 2023
Sunway University, Malaysia, Full-Day MXene Course, Dec. 16th, 2022
College de France, February 21, 2022
University of North Carolina Chapel Hill (UNC), Department of Chemistry, February 1, 2018
Integrative Research Institute for the Sciences, Humboldt-Universität Berlin Feb. 22, 2018
University of Nebraska, Lincoln, April 9, 2018
Vanderbilt University, Nashville, TN, March 23, 2018 (Tis Lahiri Award Lecture)
University of California at Los Angeles (UCLA), Materials Science Department, April 16, 2018
University of Technology, Sydney, February 9, 2018
Institute for Problems of Materials, Kiev, Ukraine, May 7-8, 2018
Latvian University, Riga, Latvia, May 9-11, 2018
University of Olomouc, Czech Republic, June 25, 2018 (Rudolf Zahradník Lecture)
School of Energy, Soochow University, Suzhou, China, July 19, 2018 (East Suzhou Scholar Lecture)
Xi'an Jiaotong University, Dec. 16, 2017
Northwestern Polytechnical University (NWPU) Dec. 15, 2017
Northwestern University, Evanston, IL, January 24, 2017
A*STAR Institute for Materials Research and Engineering, May 16, 2016
University of Central Florida, April 25, 2016
University of Pennsylvania, April 14, 2016
Michigan State University, April 7, 2016
Columbia University, February 2016
Shinshu University, Japan, Feb. 2016, May 18, 20, 2016
Tongji University, Shanghai, China, Nov. 2015
National Cheng Kung University (NCKU), Tainan, Taiwan, Oct. 2015
Huazhong University of Science and Technology (HUST), Wuhan, China, Oct. 2015.
Duke University, Mechanical Engineering Department, Aug. 26, 2015
North Carolina State University, Materials Science and Engineering Department, Aug. 25, 2015
The Chinese University of Hong Kong, Department of Electronic Engineering, June 30, 2015
City University of Hong Kong, June 29, 2015
Hong Kong University of Science and Technology, Energy Institute Seminar, June 26, 2015
Nanyang Technological University, Singapore, July 1, 2015; May 17, 2016
University of Chicago, Oct. 3, 2014
Texas A&M University, TX, March 2014
Brown University, Providence, RI, February 2014
Deakin University, Australia, Feb. 2014
University of Kentucky, annual **Dawson Lecture**, Oct. 25, 2013
University of Maryland, MD, May 2, 2013
SUNY Binghamton, February 28, 2013
Columbia University, New York, NY, March 15, 2013
California Institute of Technology (Caltech), Pasadena, CA, February 2013
Queens College, CUNY, NY, April 2, 2012
Pacific Northwest National Laboratory, April 6, 2012
University of Texas, Austin, DOE EFRC on Charge Separation and Transfer, April 18, 2012
Dalian University of Technology, Dalian, China
National Taiwan University, August 9, 2012
Huazhong University of Science and Technology (HUST), Wuhan, China, October 2012
National Cheng Kung University, Tainan, Taiwan, November 22, 1012
KAUST, Saudi Arabia, Dec. 5, 2012
MPIF Technical Program Committee (PowderMet2012), Philadelphia, Nov. 8, 2011
Dalian University of Technology, Dalian, China, Nov. 17-18, 2011

Department of Materials Science and Engineering, National Cheng Kung University, Taiwan, Nov. 23, 2011
Lehigh University, Chemistry Department, Feb. 22, 2012
Carnegie Melon University, March 2, 2012
AIChE Webinar on "Carbon Nanomaterials for Energy-Related Applications", March 7, 2012
Renselaar Polytechnic Institute, Albany, NY, April 14, 2010
Cornell University, Ithaca, NY, April 9, 2010
Jack Fest, A symposium to Celebrate Jack Fischer, University of Pennsylvania, May 1, 2009
Oak Ridge National Laboratory, Oak Ridge, TN, 2009
University of Tennessee, Knoxville, TN, 2009
Texas A&M, College Station, TX, April 3, 2009
University of Albany, SUNY, March 13, 2009
University Of Brighton, Brighton, UK, March 11, 2009
Imperial College, London, March 9, 2009
Clemson University, SC, March 6, 2009
Naval Research Laboratory, Washington, DC, February 27
Georgia Tech, Materials Science and Engineering Department, October 7, 2008
University of Pennsylvania, Materials Science and Engineering Department, September 27, 2008
University of Connecticut, School of Engineering, February 28, 2008
Laboratory for Analysis and Architecture of Systems (LAAS), CNRS, Toulouse, France, March 13, 2008
Temple University, Chemistry Department, September 27, 2007
Headwaters, NJ, September 28, 2007
Rutgers University, Department of Chemical Engineering, October 3, 2007
Laboratoire de Chimie de Coordination du CNRS, Toulouse, Nov. 6, 2007
Centre Interuniversitaire de Recherche et d'Ingénierie des Matériaux (CIRIMAT), Universite Paul Sabatier, Toulouse, Nov. 9, 2007
Laboratoire de Reactivite et de Chimie des Solides, CNRS, Amiens, France, Nov. 27, 2007
Toulouse Nanotube Research Group Meeting, CEMES CNRS, France, Nov. 28, 2007
DuPont China, Shanghai, Nov. 15, 2007
Dalian University of Technology, Chaina, Nov. 18-19, 2007
Oak Ridge National Laboratory, April 18, 2008
University of Texas-Dallas, February 2007
Texas Catholic University, **Award lecture**, February 2007
University of Nebraska, Lincoln, **Centennial Seminar Series**, October 2006
Corning, Inc., Carbon Workshop, Corning, NY, September 2006
Procter and Gamble, Cincinnati, OH, September 2006
Institute of Materials Science, Ukrainian National Academy of Sciences, September 2006
Ain Shams University, Cairo, Egypt, July 2006
Arkema, Inc., Research Board Meeting, King of Prussia, April 2006
University College London, February 2006
Brown University, Providence, RI, November 2005
Queen Mary College, London, UK, March 2005
Lehigh University, Bethlehem, PA, October 2004
Michigan Tech, Haughton, MI, October 2004
University of Pennsylvania, Philadelphia, PA, April 2004
Case Western Reserve University, Cleveland, OH, March 2004
Goodrich Aerospace Corporation, Cleveland, OH, March, 2004
National Institute of Standards and Technology, 2003
Rutgers University, New Brunswick, NJ, March 2002
Korean Institute of Science and Technology, Seoul, May 2001
Philadelphia Liberty Bell Chapter of ASM International, April 2001
Drexel University, Departments of Chemistry and Physics, January 2001
DARPA, January 2001, December 2001
NASA Langley Research Center, 2000
Argonne National Laboratory, Chicago, IL, March 2000
University of Michigan at Ann Arbor, Ann Arbor, MI, 1999

University of Illinois at Urbana-Champaign, Urbana, IL, 1995, 1997, 1999
Tokyo Institute of Technology, Tokyo, Japan, December 1997
Hokkaido University, Sapporo, Japan, December 1997
Institute of Materials Science, Kiev, Ukraine, 1997
Pennsylvania State University, University Park, PA, 1994
University of Rome "Tor Vergata", Rome, Italy, September 1995
Chalmers University of Technology, Gothenburg, Sweden, October 1994
CNRS, Paris, France, 1995
University of Karlsruhe, Germany, October 1993; December 1994
University of Stockholm, Sweden, October 1994
University of Bergen, Bergen, Norway, April 1994
University of Limoges, France, June 1994; 1999
Rutgers University, New Brunswick, NJ, July 1995
Government Research Institute, Nagoya, Japan, 1993
National Institute of Standards and Technology, Bethesda, MD, 1993

Consulting and Entrepreneurship

MXene, Inc. (founder)
Y-Carbon, Inc. (founder)
Materials Research Center, Kiev, Ukraine (founder)
Art and Craft, Turkey
The Cadmus Group, WA
EPSCOR Foundation, DC
Corning, NY
NanoBlox, FL
Foster-Miller, MA
Kurth, Ylitalo and Couden, TX
ABB (Asea Brown Boveri), Heidelberg, Germany
Microsin, Kiev, Ukraine

Industrial Partners

(DNI Industry Consortium members, industrial collaborators, or partners on STTR/SBIR proposals)
AETC
Alion Science and Technology Corporation
AlumiFuel
Amerinova
Arkema
Art&Craft
Ashland Chemical
Aspen Aeerogels
BAE Systems
BASF
Checkpoint
Cooper Standard
Cytostorm Inc.
Dentsply
Discovery Pharmaceutical Sciences
Delux
EnerSys
Evonik/SP3
Exponent
Hemolife

Honda
Hyundai
Innova Dynamics
Johnston Controls
KOEI Chemicals
Lockheed Martin
Meta Tenna
Murata Manufacturing
Nanoblox
Rayner
Superior Graphite
Toyota
Universal Technology Corporation

Unsolicited Coverage in Media

Associated Press
ABC (Channel 6)
BBC Science Watch
Channel 17 (TV News)
Chemical & Engineering News (C&EN)
Chemistry & Industry (UK)
Chicago Sun Time
Frankfurter Allgemeine Zeitung (German daily newspaper)
Financial Times (London)
Fox News
Frost & Sullivan web site - www.frost.com
Gazeta.Ru (leading Russian internet publication)
IEEE Spectrum
InChemistry - ACS Student Magazine
Inside R&D (Web alert service)
Le Monde (French daily newspaper)
Liberation (French daily newspaper)
Materials Research Bulletin
Materials Today
Metro
Nano Today
Nanotechweb.org
National Public Radio
Nature
Neue Zuercher Zeitung (Swiss daily newspaper)
Nikkei Shinbun (Japanese business newspaper)
Philadelphia Inquirer
Philadelphia Business Journal
Science
Spektrum der Wissenschaft (German magazine of popular science)
TRN News (Web magazine)
United Press International (UPI)
WHYY Radio
WPVI Television
and many other newspapers, professional magazines and Web sources

Selected Grants

(Past 20 years)

Title: MX Innovation. Commercial MXene manufacturing toward technology innovations in the UAE and beyond
Agency: RIC-2D, Khalifa University, UAE
Total Award Amount: $5,305,183
Date: 03/2024-03/2027

Title: Scalable Manufacturing of Functional Yarns for Textile-based Energy Storage
Agency: US Army via Directed Vapor Technologies, Inc.
Total Award Amount: $250,000
Date: 06/2022-05/2024

Title: Molecular Insights for Fine-Tuned Hydrogen Interaction Control
Agency: Dept. of Energy via Savannah River National Laboratory
Total Award Amount: $580,000
Date: 10/2022-09/2025

Title: MXene-based Coatings for Aerospace Applications (Phase II)
Agency: Air Force Research Lab via Ballydel Technologies
Total Award Amount: $375,000
Date: 09/2023-10/2025

Title: Center for MXenes Synthesis, Tunability and Reactivity (M-STAR)
Agency: National Science Foundation
Total Award Amount: $1,800,000
Date: 09/2023-08/2026

Title: MXene-based Coatings for Aerospace Applications (Phase I)
Agency: Air Force Research Lab via Ballydel Technologies
Total Award Amount: $75,000
Date: 11/09/2021-5/09/2022

Title: Liquid Electrolytes for Lithium-Sulfur Batteries with Enhanced Cycle Life and Energy Density Performance
Agency: Department of Energy/Giner, Inc.
Total Award Amount: $400,000
Date: 10/01/2021-12/31/2024

Title: Validating MXene Electrodes for Next-Generation Electroencephalography
Agency: Nation Institute of Health
Total Award Amount: $1,376,953
Date: 6/01/2021 - 11/30/2022

Title: Electromagnetic Shields Based on MXene Nano-Metamaterials
Agency: NSF
Total Award Amount: $489,998.00
Date: 6/01/2021-5/31/2024

Title: Integrated Soldier Protective System for Unburdened Chem-Bio
Protection

Agency: DARPA/Flir
Total Award Amount: $100,000
Date: 05/26/2021-11/26/2021

Title: Ion Fountain Nanopore Readers for High-Resolution DNA and RNA Sequencing
Agency: National Institute of Health via Northeastern University
Total Award Amount: $627,457
Date: 7/15/2021-6/30/2023

Title: Synthesis and Optoelectronic Properties of Solid Solution MXenes
Agency: NSF
Total Award Amount: $450,000.00
Date: 3/01/2021-02/28/2025

Title: DOE SBIR Phase I
Agency: Giner, Inc.
Total Award Amount: $35,000
Date: 2/22/2021-11/21/2021

Title: Fabric-based power generation and storage
Agency: Triton (via AFFOA)
Total Award Amount: $275,001.00
Date: 8/01/2020-5/04/2022

Title: EAGER: MXene Sorbents for Continuous Renal Replacement Therapy
Agency: NSF
Total Award Amount: $200,000
Date: 7/15/2020-6/30/2022

Title: High Energy Density and High Cycle Life Lithium -Sulfur Battery for Electrified Aircraft Propulsion
Agency: Giner, Inc.
Total Award Amount: $130,000
Date: 6/18/2020-6/17/2022

Title: MXene Sorbents for Efficient and Cost-Effective Dialysate Regeneration
Agency: Coulter Foundation
Total Award Amount: $194,000
Date: 4/21/2020-5/31/2022

Title: High Energy Density Lithium-Sulfur Battery with Improved Cycle Life
Agency: NASA (via Giner, Inc.)
Total Award Amount: $130,000
Date: 8/13/2019-5/31/2022

Title: Cooperative Agreement: Collaborative Hierarchical and Agile Resonant Materials
Agency: U.S. Army Research Lab
Total Award Amount: $9,097,925.00
Date: 05/15/2015-09/30/2022

Title: Compositional Control of Fundamental Electronic and Magnetic
Properties of Ordered Layered Multielemental MXenes
Agency: Department of Energy: BES

Total Award Amount: $1,600,000
Date: 3/01/2018-8/31/2022

Title: 2D transition metal carbides MXenes-TiO2 composites and their optical properties
Agency: ARO
Total Award Amount: $70,000
Date: 12/08/2017-12/07/2018

Title: Transition Metal Carbides/Nitrides (MXenes) for Advanced Self-repairing Lightweight Composite Materials
Agency: ARO
Total Award Amount: $300,000
Date: 9/1/2017-8/31/2019

Title: Fundamental Study of Ordered MXenes and Their Defects
Agency: NSF
Total Award Amount: $671,765.00
Date: 8/15/2017-7/31/2022

Title: Double Transition Metal MXenes for Capacitive Energy Storage
Agency: Kaust
Total Award Amount: $325,000
Date: 03/01/2017-2/28/2020

Title: Development of Products based on 2D transition metal carbides (MXenes)
Agency: Murata Manufacturing
Total Award Amount: $389,300
Date 2/2017-2/2018

Title: Exploration of MXene Materials
Agency: Murata Manufacturing
Total Award Amount: $1,935,272.52
Date: 2/01/2016-12/31/2022

Title: Energy Frontier Research Center for Fluid Interface Reactions,
Structures and Transport (FIRST) Energy Frontier Research Center
Agency: Department of Energy: BES (via ORNL)
Total Award Amount: $2,372,400.00
Date: 10/14/2016-09/14/2022

Title: BN-reinforced Ceramics
Agency: Dentsply Prosthetics
Total Award Amount: $50,000
Dates: 9/1/2016-2/28/2017

Title: Two Dimensional (2D) MXene Phases for Energy & Electronic Applications
Agency: KAUST
Total Award Amount: $400,000
Date: 1/1/2015-31/1/2017

Title: Energy Frontier Research Center for Fluid Interface Reaction, Structures and Transport (EFRC-FIRST)
Agency: Department of Energy
Amount: $1,300,000
Date: 9/1/2014-10/1/2018

Title: Indentation Study of 2D Carbides for Manufacturing Novel Multifunctional Composites
Agency: Army Research Office
Amount: $50,000
Date: 8/18/2014 – 4/17/2015

Title: Room-temperature Electrochemical Synthesis of Carbide-derived Carbons and Related Materials
Agency: DOE
Amount: $240,000
Date: 9/1/2013 – 2/28/2015

Title: Synthesis and Characterization of Two-Dimensional $M_{n+1}X_n$ Layers Derived from the MAX Phases (Co-PI)
Agency: NSF
Amount: $520,000
Date: 9/1/2013-8/31/2017

Title: MXenes: New Two-Dimensional Ceramics
Agency: French American Cultural Exchange (PUF of the French Embassy)
Amount: $83,000
Date: 9/1/2012-8/31/2015

Title: Development of Electrode Architectures for High Energy Density Electrochemical Capacitors
Agency: University of California Los Angeles/Sandia National Laboratory
Amount: $385,000
Date: 3/22/2011-9/21/2015

Title: Two-Dimensional Metal Carbides (MXenes) for Next Generation Water Treatment Membranes
Agency: QNRF-NPRP
Amount: $213,370
Dates: 12/1/2016-6/26/2019

Title: Probing Intercalation-Induced Dimensional Changes in Composite Porous Electrodes by QCM-D
Agency: BSF
Amount: $63,450
Dates: 1/1/2016-12-31/2018

Title: Printed, Flexible Ultracapacitors Based on Novel, High-Performance Carbon Nanomaterials
Agency: SI2 Technologies, INC
Amount: $250,000
Date: 04/24/2015 – 01/15/2017

Title: Carbon Materials for Energy Storage
Agency: Honda Research Institute
Amount: $120,000
Date: 03/01/2015-02/28/2016

Title: Development of New Carbon Materials and Design of a Device for Testing
Agency: Hemolife
Amount: $106,400
Dates: 1/1/2016-12/31/2016

Title: MXenes: New Two-Dimensional Ceramics
Agency: French American Cultural Exchange (PUF of the French Embassy)
Amount: $83,000
Date: 9/1/2012-8/31/2015

Title: Global Innovation Network: Nanostructured materials to control contaminants for healthcare applications.
Agency: British Council (via University of Brighton)
Total Award Amount: $70,901
Date: 03/21/2014 – 03/31/2016

Title: MRI: R2: Development of Common Platform for Unifying Humanoids Research (Co-PI)
Agency: NSF
Amount: $$5,999,997 (total grant amount)
Date: 7/1/2010-7/1/2015

Title: Nanodiamond Platforms For Anticancer Chemotherapeutics Delivery In Brain
Agency: SARI/Drexel
Amount: $350,000
Date: 7/1/2011-7/1/2015

Title: Industrial Manufacturing of Nano-Graphitic Obscurant Aerosols
Agency: American Energy Technologies Co.
Amount: $8,169
Date: 1/1/2013-6/28/2013

Title: Development of Electrochemical Flow Capacitor Prototype for Rapid Energy Storage in Smart Grid Applications (Co-PI)
Agency: Ben Franklin Technology partners
Amount: $150,000
Date: 9/1/2012-9/1/2013

Title: SBIR: New and Improved Lithium Ion Battery
Agency: NASA/American Energy Technologies Co.
Amount: $14,031
Date: 2013

Title: SST – Smart Surgical Tools: Bioactive Surgical Fixation Devices for Enhanced Bone and Tissue Regeneration
Agency: Wallace Coulter Foundation
Amount: $100,000
Date: 2013

Title: Power Reactant Delivery System for Air Independent Fuel Cell
Agency: Ingenium Technologies
Amount: $21,000
Date: 2013

Title: International Collaboration in Chemistry: Ionic Liquid in Confined Environments
Agency: National Science Foundation
Amount: $365,174
Date: 9/15/2009-9/14/2012

Title: Energy Frontier Research Center for Fluid Interface Reaction, Structures and Transport (EFRC-FIRST)
Agency: Department of Energy
Amount: $675,000
Date: 9/15/2009-9/14/2014

Title: The Influence of Electrolyte Structure and Electrode Morphology on the Performance of Ionic Liquid Base Supercapacitors
Agency: Department of Energy/University of Utah
Amount: $494,514
Date: 10/1/2009-9/30/2012

Title: EAGER Carbide Derived Carbons with Pore Structure and Surface Chemistry Designed for Selective Adsorption of Proteins
Agency: National Science Foundation
Amount: $125,000
Date: 9/1/2009-3/01/2011

Title: New Materials Synthesis and Processes for Energy Storage Microdevices
Agency: PUF of the French Embassy
Amount: $83,000
Date: 10/1/2009-9/30/2012

Title: Keck Institute for Attofluidic Nanotube-based Probes
Agency: W.M. Keck Foundation
Amount: $1,000,000
Award Period: 06/01/07 – 05/31/10

Title: RET Site: Research Experience for Teachers in Nanotechnology (RET-Nano)
Agency: National Science Foundation
Amount: $500,000
Date: 9/1/2007-8/31/2012

Title: IGERT: Nanoscale Engineering and Science: One Campus, Two-University Approach
Agency: National Science Foundation
Amount: $3,000,000
Date: 9/1/2009-8/31/2012

Title: NIRT: Nanotube-based nanofluidic devices and fundamental fluid studies at the nanoscale
Agency: National Science Foundation (NSF)
Amount: $1,002,000
Date: 09/01/06 – 08/31/10

Title: Development of the laboratory-based course in Lean Six Sigma nanomanufacturing
Agency: National Science Foundation
Amount: $150,000

Date: 1/1/2009-1/1/2011

Title: New Layered Nanolaminates for Use in Lithium Battery Anodes
Agency: Department of Energy/Lawrence Berkley National Laboratory
Amount: $1,057,470
Date: 10/1/2010-12/31/2014

Title: SBIR: Power Reactant Delivery System of Air Independent Fuel Cell
Agency: Office of Naval Research
Amount: $30,000
Date: 7/1/2010-2/1/2011

Title: MRI-R2: Development of Common Platform for Unifying Humanoids Research
Agency: NSF
Amount: $5,999,997.00
Date: 7/1/2010-7/1/2015

Title: Low Temperature Synthesis of Carbide-Derived Carbons from Binary and Ternary Carbides in the Si-Ti-C Systems: Experiments and Modeling
Agency: Department of Energy
Amount: $700,000
Date: 9/1/2010-2/28/2015

Title: Carbide-derived carbons with tunable pore size for hydrogen storage
Agency: DoE through University of Pennsylvania
Amount: $650,000 (Drexel share)
Date: 09/30/04 – 09/30/09

Title: Nanoscale Cellular Probes
Agency: NanoTechnology Institute
Amount: $98,999
Date: 09/01/08 – 12/31/09

Title: Catalytically Active Nanostructured Carbons
Agency: Army Research Office
Amount: $75,000
Date: 6/1/09-5/31/2010

Title: Advanced Filtration Systems
Agency: Global Protection, Inc.
Amount: $231,929.07
Date: 12/15/06 – 12/14/08

Title: Carbide-Derived Carbons with Tunable Pore Size for Hydrogen Storage (Co-PI)
Agency: DOE
Amount: $557,780 (Drexel part)
Date: 09/30/04 – 09/30/08

Title: Surface Modification of Nanodiamond for Drug Delivery Applications (PI)
Agency: NanoBlox and BFTP
Amount: $100,000
Date: 01/01/06-12/31/07

Title: Filling carbon nanotubes with metal nanoparticles
Agency: NAVSEA
Amount: $99,975
Date: 07/27/07 – 07/26/08

Title: Electron Microscopies
Agency: National Science Foundation
Amount: $498,000
Date: 09/2007-08/2008

Title: Manufacturing of Drug Nano-Dispersions
Agency: National Science Foundation
Amount: $121,564
Date: 06/01/2006 – 05/31//2008

Title: One-Dimensional Probes Made of Carbon Nanotubes (PI)
Agency: NTI / Ben Franklin Technology Partners of Southeastern Pennsylvania
Amount: $205,522
Date: 08/01/02-07/31/06

Title: Research Experience for Teachers in the Areas of Innovative and
Novel Technologies in Philadelphia (RETAIN)
Agency: National Science Foundation
Amount: $21,000 (REU supplement)
Date: 09/01/02 – 08/31/05

Title: Acquisition of a Field Emission Scanning Electron Microscope Equipped With Wavelength Dispersive X-Ray Spectrometer (Co-PI)
Agency: DOD/ARO
Amount: $170,000
Date: 01/07/2004 - 01/07/2005

Title: Acquisition of ICP System within Two Universities/One Campus Framework (Co-PI)
Sponsor: NSF
Amount: $350,000
Date: 08/15/2004 – 08/14/05

Title: One-Dimensional Probes Made of Carbon Nanotubes (PI)
Agency: NTI / Ben Franklin Technology Partners of Southeastern Pennsylvania
Amount: $155,522
Date: 08/01/02-07/31/04

Title: A New Class of Nanostructured Carbon Materials: Graphite Polyhedral Crystals (PI)
Agency: DOE
Amount: $425,000
Date: 09/01/01 – 02/28/05

Title: Characterization of Ti-Pb and Ti-graphite composites
Agency: Electrodes International
Amount: $30,000
Date: 2003

Title: Carbon Nanotube Reinforced Carbon Fiber
Agency: Hexcel Corporation /NAVAIR
Amount: $111,700
Date: 06/01/03– 12/31/03

Title: Synthesis and Characterization of Carbide-Derived Carbon for Chemical and Energy Systems
Agency: DARPA via ONR
Amount: $677,000
Date: 07/01/01 – 06/30/04

Title: GAANN Fellowships in Emerging Areas of Research: Nanotechnology, Information Technology, and Biotechnology
Agency: Department of Education
Amount: $846,930
Date: 9/01/03 – 08/31/07

Title: Phase Transformations in Ceramics and Semiconductors
Agency: NSF
Amount: $239,778
Date: 9/1/00-2/29/04

Title: Development of BAN coating for SiC
Agency: SSG
Amount: $66,836
Date: 1/2/03-12/31/03

Title: Nano Technology Institute
Agency: Ben Franklin Technology Partners of Southeastern Pennsylvania
Amount: $155,522
Date: 08/01/02-07/31/04

Title: Acquisition of Near-Field and UV Raman Instruments
Agency: Ben Franklin Technology Center
Amount: $100,000
Date: 08/01/02-07/31/03

Title: IGERT Fellowships in the Area of Nanoscale Engineering and Science: A New Educational Model Combining Two Universities
Agency: National Science Foundation
Amount: $3,000,000
Date: 12/01/02-11/30/07

Title: Novel Carbon Films for Next Generation Rotating Equipment Applications
Agency: University of Illinois at Chicago/DOE
Amount: $495,375
Date: 04/01/02-12/31/04

Title: Carbide-Derived Carbon Filters for Biohazardous Materials
Agency: Drexel University Synergy Grant
Amount: $20,000
Date: 7/1/2002 – 6/30/2003

Title: Biocompatibility and Immune Response of Carbon Nanotubes
Agency: Drexel University Synergy Grant
Amount: $20,000
Date: 7/1/2002 – 6/30/2003

List of Graduated and Current MS/PhD Students and Post Docs

Bita Soltan Mohammadlou, PhD
Deniz Çakir, PhD
Ikel Hernandez, PhD
Cliff Ng, PhD
Michael Prati, PhD
Yash Athreya, PhD
Eda Cevik, PhD
Michael Evans, PhD
Kateryna Diedkova, PhD
C. Alex Inman, PhD
Asaph Lee, MS
Benjamin Chacon, PhD
Danzhen Zhang, PhD
Eliot Precetti, PhD
Geetha Valurouthu, PhD
Jamal Alhourani, PhD
James Fitzpatrick, PhD
Kyle Matthews, PhD
Lingyi Bi, PhD
Roman Rakhmanov, PhD
Sokhna Dieng, PhD
Tetiana Hryhorchuk, PhD
Teng Zhang, PhD
Mark Anayee, PhD
Anastasia Morozova, MS
Mikhailo Yilepshilev, MS
Kateryna Shevchuck, MS/PhD
Adam Goad, MS
Pol Salles, MS
Cedric Couley, MS
Kanit Hantanasirisakul, PhD
Asya Sarycheva,PhD
Fayan Meng, Post Doc
Muhammad Boota, PhD
Mohamad Alhabeb, PhD
Mengqiang Zhao, Postdoc
Nicholas Pescatore, MS
Kathleen Maleski, PhD
Christine Hatter, PhD
Tyler Mathis, PhD
Chuonfang (John) Zhang, PhD
Muge Acik, Post Doc
Kevin Cook, Post Doc

Mengqiang Zhao, Post Doc
Majid Beidaghi, Post Doc
Ioannis Neitzel, PhD
Yohan Dall'Agnese, PhD
Jonathan Campos, MS
Riju Singhal, PhD
Carlos Perez, PhD
Chang Ren, PhD
Boris Dyatkin, PhD
Kelsey Hatzell, PhD
Min Heon, PhD
Kristy Jost, PhD
Maria Lukatskaya, PhD
Olha Mashtalir, PhD
Jake McDonough, PhD
Katherine Van Aken, PhD
Christopher Dennison, PhD
Roger Swartz, MS
Pavel Ruvinsky, Post Doc
Michael Naguib, PhD
Isabel Nocke, Post Doc
Jun Jie Niu, Post Doc
Michael Schrlau, Post Doc
Volker Presser, Post Doc
Bastian Etzold, Post Doc
Taha Demirkan, MS
Veli Kara, MS
Patricia Redington, MS
Shruti Gour, MS
Valarie Pelletier, MS
Elina Vitol, PhD
Murat Kurtoglu, PhD
Amanda Pentecost, PhD
Marianna Kharlamova, MS
Vadym Mochalin, Post Doc
Sayan Bhattacharyya, Post Doc
Sun-Hwa Yeon, Post Doc
M. Teresa Ubieto, Post Doc
Kris Behler, PhD
Benjamin Legum, PhD
Byung-Yong Lee, Post Doc
Guzelya Korneva, PhD
Davide Mattia, PhD
Chris Hobson, MS
John Chmiola, PhD
Sauji Yachamaneni, MS
Sebastian Osswald, PhD
Mickael Havel, Post Doc
Cristelle Portet, Post Doc
Byung-Yong Lee, Post Doc
Sayan Bhattacharyya, Post Doc

Maria Pia Rossi, PhD
Zarife Goknur Cambaz, PhD
Adarsh Sagar, MS
Gleb Yushin, Post Doc
Stephane Casimirius, Post Doc
Svetlana Dimovski, PhD
Hai Yang, Post Doc
Nevin Naguib, PhD
Ranjan K. Dash, PhD
Victor Jaya Nasamini, Post Doc
Sascha Welz, PhD
Edem Akpan, PhD
Daibin Ge, PhD
Vladislav Domnich, PhD, Post Doc.
Thomas Juliano, PhD
John Daghfal, MS
Beth Carroll, MS
Linlin Chen, PhD
Alexei Nikitin, Post Doc

Graduate Thesis Committee Membership

Kevin Kim, PhD committee, University of Reims, France
Yihui Wang, dissertation committee, UPenn
Chaofan Chen, PhD committee, Technical University of Delft
Stefani Susilo, PhD committee, CBE
Eric D. Laird, PhD committee
Philip Hunger, PhD committee
Riju Singhal, PhD committee
Min Heon, PhD committee
Ioannis Neitzel, PhD committee
Natali Shainsky, PhD Committee, ECE
Carlos Perez, PhD committee
Shan Chen, PhD Committee
Chris Dennison, PhD Committee, MEM
Miao (Marie) Wang, PhD Committee, MEM
Michael Naguib Abdelmalak, PhD Committee
Arianna Watters, PhD Committee, CBE
Boris Dyatkin, PhD Committee
John McDonough, PhD Committee
Jock Smith, PhD Committee (External examiner)
Jared Coyle, PhD Committee, ECE
Joey Lambert, PhD Committee, Physics
Nikolay N. Dementev, PhD Committee, Temple U, Chemistry Dept.
Murat Kurtoglu, PhD Committee
Christopher Karwacki, PhD Committee
Miao (Marie) Wang, PhD Committee, MEM
Michael Abdelmalak, PhD Committee
Elina Vitol, PhD committee, Electrical and Computer Engineering,
Patricia Reddington, PhD committee
Sara Zeppilli, MS, University of Rome - Tor Vergata, Italy

Sameet Shriyan (ECE), PhD committee
Ismail C. Albayrak, MS committee
Eric D. Laird, PhD committee
Philip Hunger, PhD committee
Bing Li, PhD committee
Taha Demirkan, MS committee
Shruti Gour, MS committee, Biomed
Natali Shainsky, PhD Committee, ECE
John Alamia, PhD Committee, ECE
Shraddha J. Vachhani, PhD Committee, MEM
Zuyan Shen, PhD, Materials Science and Engineering
Shahram Amini, PhD, Materials Science and Engineering
Jessica D. Shiffman, PhD Committee
Kexia Sun, PhD, Mechanical Engineering, University of Illinois at Chicago
Xi (Rebecca) Chen, PhD, Materials Science and Engineering
Volker Presser, PhD, Mineralogy, University of Tuebingen, Germany
Shahram Amini, PhD, Materials Science and Engineering,
Davide Mattia, PhD, Materials Science and Engineering,
Hemang Shah, PhD, Electrical Engineering
Guzelya Korneva, PhD, Chemistry
Kris Behler, PhD, Materials Science and Engineering,
John Chmiola, PhD, Materials Science and Engineering,
Sebastian Osswald, PhD, Materials Science and Engineering,
Benjamin Legum, MS, Materials Science and Engineering,
Christopher Hobson, MS, Materials Science and Engineering,
Kexia Sun, PhD, Mechanical Engineering, University of Illinois at Chicago
Prateek Gupta, PhD committee, University of Illinois at Chicago
Christopher White, PhD committee, University of Illinois at Chicago, PhD
Adrish Ganguly, PhD committee
Surojit Gupta, PhD committee
Elizabeth Hoffman, PhD committee
Lingyu Li, PhD Committee
Svetlana Dimovsky, PhD committee
Ranjan K. Dash, PhD committee
Zuyan Shen, PhD committee
Allen Lee, PhD committee, University of Illinois at Chicago
Beth Carroll, MS committee
Tom Juliano, PhD committee

Personal Data

Born: December 16, 1961; Married, 2 children; US Citizen
Signed:

