
Summary**Summary of Professional Background:**

- ❖ Associate Professor in the Department of Mechanical Engineering in University of North Dakota.
- ❖ Chair of Engineering Ceramics Division of the American Ceramics Society.
- ❖ Assistant Professor in the University of North Dakota (2012-2018)
- ❖ Research Assistant in the Department of Materials Science and Engineering in Rutgers, the State University of New Jersey (2008-2012).
- ❖ Lead inventor of technology patent of Solidia Technologies (Kliner Perkins Caulfield Byers funded Startup Company from Rutgers University) (2008-2012).
- ❖ 2 years of post-doctoral experience in The Pennsylvania State University (Joint program between PSU and Corning Incorporated) (2006-2008).
- ❖ Successfully collaborated with esteemed companies like TAG Inc., Aerospace Division of Honeywell International, Environmental Materials Division of Corning Incorporated, Electronic Materials Division of EPCOS, and 3one2 (a startup company).
- ❖ Total citations are over 1300 and an h index of 25 (source - Google Scholar).

Research and Awards Summary at UND:

- ❖ As the Director of Advanced Materials Research Group in University of North Dakota, the PI has established state of the art materials research facilities in the Department of Mechanical Engineering of the University of North Dakota in Room 12, UPSON II. This facility houses advanced manufacturing instruments like Hot Isostatic Pressing (HIP), Hot Pressing (HP), various high temperature furnaces (tube, box, and muffle furnaces), additive manufacturing printers, and various characterization instruments like weighing scales, tribometer, themomechanical analyzer, He pycnometer, among others.
- ❖ Submitted 77 proposals (an average of 13 proposals per year) with a cumulative value of ~\$9 million, and 29 proposals got funded (a success rate of 38%) with a cumulative value of \$1.17 million (including the startup funding from UND for \$150,000). The funding agencies are NSF, NSF EPSCoR, Senate Scholarly Activity Committee (SSAC), CEM and ME UND, VP Research UND, NSF support from University of Minnesota, NASA EPSCoR, Cooperative Research and Development Agreement (CRADA) with Army Research Lab, ND Research, Oak Ridge National Lab (ORNL), and ND Venture.
- ❖ Published 53 peer reviewed papers/proceedings in prestigious journals, 1 book chapter, and 4 patent applications (2 granted and 2 pending).
- ❖ Presented 26 invited presentations, 91 peer reviewed abstracts and/or contributed presentations, and 12 poster presentations.
- ❖ Winner of several awards: (a) Dean's Teaching Professor (2018-20), (b) TMS FMD Young Professional Development Award, (c) Global Ambassador of American Ceramic Society (ACerS) (2017), (d) Global Young Investigator Award from ECD ACerS (2016), (e) Dean's Outstanding Faculty (2016) (f) ASM/IIM lectureship award (2016), and (g) nominated for Governor's award (2017) (there were ~300 nominations from the entire state).
- ❖ NSF Panel member (2014, 2017).
- ❖ Featured scholar of the month in University of North Dakota (May, 2016).
- ❖ Signed NDA (Non-Disclosure Agreement) with Bosch Inc., and Veloxint Inc.

Teaching Summary at UND:

- ❖ Average overall USAT rating for promoting instructive teaching for different courses are:
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ME 301 (Fall 2012 (4.7/5), Fall 2016 (4.6/5), Fall 2017 (4.65/5)); ME 313 (Spring 2013 (4.8/5), 2015 (4.6/5), 2016 (4.8/5), 2017 (4.6/5) and 2018 (4.54./5)); ME 420 (Fall 2012 (4.6/5), 2013 (4.8/5), 2014 (4.8/5), 2015 (4.6/5)), ME 428 (Fall 2015) – 4.8/5, ME 490 (Spring 2014 (4.8/5), 2016 (4.6/5)), and 2018 (4.5/5)) (High Temperature Materials – Graduate level course which Dr. Gupta has developed), ME 590 (Advance Materials Processing – Graduate level course which Dr. Gupta has developed) (Spring 2015) – 4.6/5, ME 590 (Biomaterials – Graduate level course which Dr. Gupta has developed) (Spring 2017) – 4.85/5, ENGR 410 – Technology Ventures (entrepreneurship course developed for Jodsaas Center: 4.5/5) and ENGR 201 (summer course: 4/5 (2016)).

- ❖ Have graduated 13 MS students;
- ❖ Currently, supervising 1 PhD student, co-advising 2 PhD students, and advising 3 MS students.
- ❖ Committee member of 2 PhD students, and examined an international PhD thesis from Anna University, India.
- ❖ Have developed 3 Graduate level courses. ME 490 (High Temperature Materials) has been petitioned to be added as ME 514 in the curriculum.
- ❖ Board member of Jodsaas Center. As a board member, Dr. Gupta has written a quarterly letter, participated in formulating policies for the Jodsaas Center, and have developed and taught a new course on Entrepreneurship (ENGR 410 – Technology Ventures), and got a USAT rating of 4.5/5.
- ❖ On an average, advised 50 freshmen students per semester every year.
- ❖ Supervised 2 senior projects every year (the projects have won awards from College of Engineering and Mines).
- ❖ External supervisor of 4 honors theses from Electrical Engineering, Chemical Engineering and Mathematics Department.

Service Summary at UND:

- ❖ Elected senator (2016-2018), Honor Committee member (2016-2018), and Assessment Committee member (2015-2017).
 - ❖ Founder member of the Gradvocate Group in the Graduate School, University of North Dakota (2016-present).
 - ❖ Advisor for Grand Challenge Scholar Program (GCSP) (a flagship program of National Academy of Engineering).
 - ❖ Program chair of ICACC 2019, 43rd International Conference on Advanced Ceramics and Composites, Jan 27 – Feb 1, 2019.
 - ❖ Have organized or co-organized 14 high prestigious international symposiums organized by American Ceramic Society (ACerS), American Chemical Society (ACS), The Minerals, Metals & Materials Society (TMS) and chaired 17 sessions in prestigious conferences.
 - ❖ Serving as the Chair (elect) of ECD American Ceramic Society (ACerS), Member-at-large of American Chemical Society (ACS), and invited to join editorial committee of journal of ASM International.
 - ❖ Lifetime member of American Society of Metals (ASM) International, American Ceramic Society (ACerS), TMS, and Indian Institute of Metals (IIM).
 - ❖ Member of ASME, Sigma Xi, Materials Research Society, and ACS
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Education

<p>2013-2017 MBA 2006-2008 Postdoctoral Fellow Advisors: Drs. David J. Green and Gary L. Messing 2001 -2006 PhD in Materials Science and Engineering</p>	<p>University of Massachusetts, Amherst The Pennsylvania State University Drexel University</p>
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Advisor: Dr. Michel W. Barsoum

1997-2001

University of Calcutta

B. Tech (First Class with High Honors) in Ceramic Science and Technology.

Academic Positions

- ❖ **2018-present**: Associate Professor in the Department of Mechanical Engineering, University of North Dakota
- ❖ **2012-2018**: Assistant Professor in the Department of Mechanical Engineering, University of North Dakota.
- ❖ **2014**: Adjunct Professor in the Henan Polytechnic Institute, China
- ❖ **2008-2012**: Research Assistant in the Department of Materials Science and Engineering in Rutgers, the State University of New Jersey.
- ❖ **2006-2008**: Postdoctoral Scholar in the Department of Materials Science and Engineering, the Pennsylvania State University, PA.
- ❖ **2006 (July-Aug)**: Visiting postdoctoral researcher in the Department of Mechanical Engineering, Villanova University, PA.

Industrial Collaboration

- ❖ **2001-2006**: Research Fellow in the Department of Materials Science and Engineering, Drexel University, PA.
- ❖ **2017** - Joint collaboration with Veloxint Inc. in tribology (NDA signed) (A MA based start-up company).
- ❖ **2015-2018** -Dr. Gupta was awarded Venture Grant from ND Department of commerce.
- ❖ **2013-2015** - Joint collaboration with TAG Inc. on a project with funded with ND research.
- ❖ **2013-2015** - Annual student industrial visits to LM Windpower.
- ❖ **2008-2012**: Member of the core team of scientists collaborating with Solidia Technologies (a startup company from Rutgers University).
- ❖ **2006-2008**: Lead joint research program with Environmental Materials Division, Corning Incorporated.
- ❖ **2007-2008**: Consultant for EPCOS, Austria.
- ❖ **2003-2006**: Visiting scientist in Aerospace Division of Honeywell International.
- ❖ **2003-2006**: Partnered with 3one2, NJ (a startup company).

Courses Taught

ME 301 (Fall 2012 – Team teaching with Prof. M. N. Cavalli, Fall 2016, 2017, 2018)
ME 420 (Fall 2012 – Team teaching with Prof. M. N. Cavalli, Fall 2013, 2014, 2015, 2018)
ME 313 (Spring 2012, 2014, 2016, 2017, 2018, 2019)

ME 490 (Summer 2016 – Independent Study Course on Tribology)
 ME 490 (Spring 2014, 2016, 2018 – High Temperature Materials (listed as ME 513))
 ME 590 (Spring 2015 – Advanced Materials)
 ME 590 (Spring 2017, 2019 – Biomaterials)
 ENGR 201 (Summer 2015, 2016, 2017 – Statics)
 ENGR 410 (Spring 2018, 2019)
 ME 428 (Fall 2015 - Advanced Manufacturing Processes)

**Senior Design
 Thesis Advisor**

- ❖ “Intelligent Design of Ceramic Green Bodies for Smart Manufacturing”, Students (R. Johnson, T. Hammann, M. Sauka, and H. Feilen) (2012-13) (**Outstanding Senior Process Design**, 2013 College of Engineering and Mines Design Expositions).
- ❖ “On the Development of Next Generation Advanced Green Manufacturing Technologies”, E. Chejade, R. Dumm, J. Chmielewski, M. Bugliosi (2013-14) (**Second Best Senior Process Design**, 2013 College of Engineering and Mines Design Expositions).
- ❖ “Mathematical Models for Understanding Manufacturing of Advanced Materials”, R. Johnson, J. Resig, J. Carroll, S. Akkoc, and A. Ali (2013-14) (**Completely Online Project – The work was presented in a Research Conference**).
- ❖ “Silicone Creep Failure Test Fixture for Marvin Windows”, M. Jakubiec and Jake Klostermeier (2013-14) (**Industrial Project**).
- ❖ “Smart multifunctional materials by microstructure design”, S. Swanson, T. Colling, K. Lindblad, A. Eastman (2014-15).
- ❖ “Green Manufacturing”, Rick Lofthus, Abshir Nur, Matt Fuka, David Hennessey (2014-15). (**Outstanding Senior Process Design**, 2015 College of Engineering and Mines Design Expositions).
- ❖ Acting as a co-advisor of Lunarbotics team.
- ❖ “Mathematical Models for Understanding Manufacturing of Advanced Materials”, Jason Smithers, Doran Collins, Wendell Fenner, Brian Gibson, Uma Nwoke (2014-2015 – online team).

UG Advising

- ❖ Fall (2012) -Spring (2013) (58 Freshmen Students with Last Name P-Z)
- ❖ Fall (2013) - Spring (2014) (49 Freshmen Students with Last Name P-Z)
- ❖ Fall (2014) -Spring (2015) (50 Freshmen Students with Last Name P-Z)
- ❖ Fall (2015) - Spring (2016) (50 Freshmen Students with Last Name P-Z)
- ❖ Fall (2016) - Spring (2016) (50 Freshmen Students with Last Name P-Z)
- ❖ Fall (2017) - Spring (2016) (50 Freshmen Students with Last Name P-Z)
- ❖ Fall (2018) - Spring (2016) (50 Freshmen Students with Last Name P-Z)

Honors Thesis

- ❖ Ethan Doll (Mathematics, 2016-17)
- ❖ Trevor Seidel (Chemical Engineering, 2016-17)
- ❖ Brian Schill (Chemical Engineering, 2016-17)

MS Thesis Chair

- ❖ Saud Abu Aldam (2018-present)
- ❖ Chandler Borillo (2018-present)
- ❖ Grant Ellis (2018-present)
- ❖ **Highlighted portion means that the students have graduated**
- ❖ **Benjamin Langaas (ME) (2018) (Advised jointly with Dr. M. Cavalli)**
- ❖ **C. J. Sitter (ME) (2018) (Advised jointly with Dr. M. Cavalli)**
- ❖ **M. Fuka (2016-2018)**
- ❖ **M. Dey (2017-2018)**
- ❖ **Q. Tran (2016-2018)**

- ❖ K. Hall (2016-2018)
- ❖ J. Nelson (2015-2017)
- ❖ F. AlAnazi (2015-2017)
- ❖ S. Ghosh (2015-2016)
- ❖ R. Dunnigan (2014-2016)
- ❖ M. F. Riyad (2012-2014)
- ❖ T. Hammann (2013-2014)
- ❖ R. Johnson (2013-2014)

- PhD Students**
- ❖ Sabah Javaid (2018-present) (co-advising with Dr. Naima Kaabouch)
 - ❖ Maharshi Dey (2019-present)

- MS Thesis Committee Member**
- ❖ A. Pinjan (MS, 2018)
 - ❖ Ashish Kotwal (MS, 2018)
 - ❖ Ehtesam Rabbi (MS, 2017)
 - ❖ D. Berg (MS, 2016)
 - ❖ J. Burns (MS, 2016)
 - ❖ Fokruddin Ahmad (MS, 2015)
 - ❖ Emmanuel Hitimana (MS, 2015)
 - ❖ M. Rasheduzzaman (MS, 2015)

- PhD Committee Member**
- ❖ Qusay Al-Kaseasbeh
 - ❖ Ala Alemaryeen

Service

ME Department

- ❖ Guest presenter for ME 301 and ME 101.
- ❖ Actively involved during the Selection of Tenure Track Faculty Member (2013-15).
- ❖ Actively involved during the Selection of Non-Tenure Faculty Member (2012-13).
- ❖ Research Presentation during ASME Meetings in the Department (2012-14).
- ❖ Resume and Career Guidance for ME Students (2012-2014).
- ❖ Member of Department Mission Statement Committee (2013).
- ❖ Periodic Student Tours.
- ❖ Advised different senior design student groups (averaged 2-3 senior design teams each other).
- ❖ Health Ambassador (2014-present).
- ❖ Petitioned for membership of the American Ceramic Society for 10 students.
- ❖ ME Representative in Jodhaas Center and GCSP.

College

- ❖ “Fun in Materials Science”, for the High School Summer Camp as a part of Outreach Program (July 23, 2014).
- ❖ Student Advisor of Materials Club (2017-present).
- ❖ Elected Full Member of the Graduate Faculty.
- ❖ Member of the awards committee of the college.
- ❖ Founder Advisor of Materials Club.
- ❖ Member of scholarship committee.

University

- ❖ University Senator (2016-18)
- ❖ Founder member of Gradvocate Group for advocating graduate education in UND.
- ❖ Invited Judge for the 3rd Biennial Technology Symposium on “Design Thinking” Sponsored

- by the Department of Technology, CoBPA (Spring, 2013).
- ❖ Elected Member of Senate Intellectual Property Committee, University of North of Dakota (Term 2013 – 2016).
- ❖ Nominated Member of USAT Committee, University of North of Dakota (Term 2014 – 2015).
- ❖ Elected Member of University Assessment Committee, University of North of Dakota (Term 2014 – 2017).
- ❖ Invited Panel member of Alice Clark Program (2014).
- ❖ Faculty Advisor for Pi Kappa Phi Fraternity House.

Scientific Community

a. Honorary and/or Elected Positions

- ❖ Volume Editor of Ceramics Proceedings published by the American Ceramic Society (2017).
- ❖ Adjunct Professor, Henan Polytechnic University, China.
- ❖ Lifetime member of ASM International, American Ceramic Society (ACerS), and Indian Institute of Metals (IIM).
- ❖ Secretary of Engineering Ceramics Division (ECD) of ACerS.
- ❖ Member-at-large of Red River Chapter of American Chemical Society (ACS).
- ❖ Member (2015-17) and Chair of Awards Committee of Engineering Ceramics Division (ECD) (2017).
- ❖ Member of the committee on the Cobel awards of the American Ceramic Society (Appointment from 2015-2017).
- ❖ Awarded global ambassador of the American Ceramic Society (ACerS).

b. Membership

- ❖ Member of Sigma Xi, MRS (Materials Research Society), ACerS (American Ceramic Society), ASME (American Society of Mechanical Engineers) and ACS (American Chemical Society).

c. Session Chair

- ❖ Session Chair, 5th International Congress on Ceramics, Beijing, Aug 17-21, 2014.
- ❖ Session Chair, Green Technologies for Materials Manufacturing and Processing VI – Green Materials Processing III, MS&T 14, David L. Lawrence Convention Center, October 12-16, 2014, Pittsburgh, PA.
- ❖ Session Chair, 9th International Symposium on Advanced Processing and Manufacturing Technologies for Structural and Multifunctional Materials and Systems (APMT9), 39th International Conference and Exposition on Advanced Ceramics and Composites, Jan 25-30, 2015.
- ❖ Session Chair, 2nd European Union - USA Engineering Ceramics Summit, 39th International Conference and Exposition on Advanced Ceramics and Composites, Jan 25-30, 2015.
- ❖ Session Chair, Ceramics in Conventional Energy, Oil, and Gas, 11th International Conference on Ceramic Materials and Components for Energy and Environmental Applications, Vancouver, June 14-19, 2015.
- ❖ Session Chair, Novel, Green, and Strategic Processing, 11th International Conference on Ceramic Materials and Components for Energy and Environmental Applications, Vancouver, June 14-19, 2015.
- ❖ Session Chair, Green Materials Processing I, 7th International Symposium on Green and Sustainable Technologies for Materials Manufacturing and Processing MS&T 2015, Columbus, Ohio.
- ❖ Session Chair, 10th International Symposium on Advanced Processing and Manufacturing Technologies for Structural and Multifunctional Materials and Systems, 40th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2016).

- ❖ Session Chair, Additive Manufacturing and 3D Printing Technologies, Emerging Technology, 40th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2016).
- ❖ Session Chair, 5th Global Young Investigator Forum Applications: Ceramic Sensors and Actuators, Energy Generation and Storage and Processing, 40th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2016).
- ❖ Session Chair: Materials Property Understanding through Characterization – Advanced Materials, MS&T 2016, Salt Lake City, October 23-27.
- ❖ Session Chair, The 8th International Symposium on Green and Sustainable Technologies for Materials Manufacturing and Processing – Green Materials Processing II, MS&T 2016, Salt Lake City, October 23-27.
- ❖ Session Chair, Stereolithography, 41th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2016).
- ❖ Session Chair, Materials Design, New Composition and Composites, 41th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2016).
- ❖ Session Chair, New Precursors for Powders, Coatings, and Matrix or Fibers of Composites, 41th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2016).
- ❖ Session Chair, Design Oriented Manufacturing, 41th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2016).
- ❖ Session Chair: Academics, Research, Industry, and Funding, 12th Pacific Rim Conference on Ceramic and Glass Technology (PACRIM 12), including Glass & Optical Materials Division Meeting (GOMD 2017), May 21-26 (2017).
- ❖ Session Chair: S12: Advanced MAX/MXene Phases and UHTC Materials for Extreme and High Temperature Environment, Different Perspectives on Designing of MXenes (chaired 2 sessions).
- ❖ Session Chair: 10th International Symposium on Green and Sustainable Technologies for Materials Manufacturing and Processing, MS&T (2018).
- d. Organizer/co-organizer of Symposiums**
- ❖ Co-organized: 9th International Symposium on Advanced Processing and Manufacturing Technologies for Structural and Multifunctional Materials and Systems (APMT9), 39th International Conference and Exposition on Advanced Ceramics and Composites, Jan 25-30, 2015.
- ❖ Organized: T2S7: Ceramics in Conventional Energy, Oil, and Gas Exploration, 11th International Conference on Ceramic Materials and Components for Energy and Environmental Applications, Vancouver, June 14-19, 2015.
- ❖ Co-organized: T4S3: Novel, Green, and Strategic Processing and Manufacturing Technologies, 11th International Conference on Ceramic Materials and Components for Energy and Environmental Applications, Vancouver, June 14-19, 2015.
- ❖ Co-organized 7th International Symposium on Green and Sustainable Technologies for Materials Manufacturing and Processing, MS&T 2015, Columbus, Ohio.
- ❖ Lead Organizer, Young Professional Forum, 9th International Conference on High Temperature Ceramic Matrix Composites and Global Forum on Advanced Materials and Technologies for Sustainable Development, Toronto (2016).
- ❖ Co-organized, 10th International Symposium on Advanced Processing and Manufacturing Technologies for Structural and Multifunctional Materials and Systems (APMT-10), 40th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2016).
- ❖ Co-organizer, Novel, green, and strategic processing and manufacturing technologies, 9th International Conference on High Temperature Ceramic Matrix Composites and Global

Forum on Advanced Materials and Technologies for Sustainable Development, Toronto (2016).

- ❖ Co-organizer, The 8th International Symposium on Green and Sustainable Technologies for Materials Manufacturing and Processing, MS&T 2016, Salt Lake City, October 23-27.
- ❖ Co-organizer: 11th International Symposium on Advanced Processing and Manufacturing Technologies for structural and multifunctional materials and systems, 41th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach (2017)
- ❖ Co-organizer: Materials for extreme environments: ultrahigh temperature ceramics (UHTCs) and nanolaminated ternary carbides and nitrides (MAX Phases), 41th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach (2017).
- ❖ Co-organizer: Additive Manufacturing and 3D Printing Technologies, 12th Pacific Rim Conference on Ceramic and Glass Technology (PACRIM 12), including Glass & Optical Materials Division Meeting (GOMD 2017), May 21-26 (2017).
- ❖ Lead Organizer, Young Professional Forum: Design and Application of Next Generation Multifunctional Materials: Addressing the New Millennium's Societal Challenges, 12th Pacific Rim Conference on Ceramic and Glass Technology (PACRIM 12), including Glass & Optical Materials Division Meeting (GOMD 2017), May 21-26 (2017).
- ❖ Lead Organizer, Novel Manufacturing Technologies for the Development of Sustainable Multifunctional Material, GLRM, Fargo, ND, June 27-30, 2017.
- ❖ Lead Organizer, The 9th International Symposium on Green and Sustainable Technologies for Materials Manufacturing and Processing, 8-10 October, MS&T, Pittsburgh (2017).
- ❖ Co-organizer, 12th International Symposium on Advanced Processing and Manufacturing Technologies for Structural and Multifunctional Materials and Systems (APMT12), 42nd International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach (2018).
- ❖ Lead organizer, Advanced MAX/MXene Phases and UHTC Materials for Extreme and High Temperature Environment, 42nd International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach (2018).
- ❖ Lead Organizer, SYMPOSIUM T2S7: The 2nd International Symposium on Ceramics in Conventional Energy and Biomedical, Oil, and Gas Exploration, CMCEE Singapore, 12th International Conference on Ceramic Materials and Components for Energy and Environmental Application, 22-27 July 2018.
- ❖ Co-organizer, "10th International Symposium on Green and Sustainable Technologies for Materials Manufacturing and Processing", Columbus, MS&T 2018.

e. Program Chair

- ❖ Program chair of ICACC 2019, 43rd International Conference on Advanced Ceramics and Composites, Jan 27 - Feb 1, 2019. The key events this prestigious conference are, International 40th Anniversary Richard M. Fulrath Award Symposium on "Frontiers of Ceramics for Sustainable Society", seventeen symposia, four focused sessions on emerging technologies, the 8th Global Young Investigator Forum, and a special focused session on Diversity, Entrepreneurship, and Commercialization.

Peer Reviewer

- ❖ **2012-2013:** Corrosion Science (1 manuscript), Tribology International (3 manuscripts), Journal of International Tribology (1 manuscript), and International Journal of Materials Research (1 manuscript).
- ❖ **2013 (Spring, Summer, and Fall):** Applied Surface Science (1), Tribology Letters (3), Tribology International (3), Journal of Materials Research (1), Journal of Engineering Tribology (1), Journal of Alloys and Compounds (2), The Electrochemical Society (1), International Journal of Materials Research (1), Journal of Physics and Chemistry of Solids (1), Ceramics International

- (2), Thin Film Solids (1), Surface and Coatings Technology (1), Material Letters (1).
 ❖ **2014 (Spring, Summer, and Fall):** International Journal of Applied Ceramics Technology (1), American Chemical Society (1), Journal of Materials Science (1), Materials Research Letters (1), Journal of Materials Engineering and Performance (1), Journal of Physics and Chemistry of Solids (1), International Journal of Refractory Metals and Hard Materials (1), Coatings (1), Journal of Alloys and Compounds (1), and Tribology Letters (1).
 ❖ **2015 (Spring, Summer, and Fall):** Materials and Design (1), Tribology Transactions (1), Ceramics International (3), Coatings (1), Tribology Letters (1), Tribology International (1), Journal of Alloys and Compound (1), Corrosion Science (1), Journal of Materials Engineering and Performance (2)
 ❖ **2016 – Reviewed several manuscripts and SBIR Review**

Research Experience

HIGH IMPACT RESEARCH IN MATERIALS SCIENCE AND ENGINEERING AT THE UNIVERSITY OF NORTH DAKOTA

2012-present

University of North Dakota

Dr. Gupta is in the process of developing following areas in University of North Dakota namely, (a) sustainable materials (main areas of research are green polymers, lignin reinforced biocomposites, CO₂ sequestration, solar energy, and green cements), (b) advanced engineered composites (solid state lubrication and oil free systems, metal matrix composites (MMCs), ceramic matrix composites (CMCs), and polymer matrix composites (PMCs)), and (c) advanced manufacturing technologies of materials research (Green manufacturing (GM) and Additive Manufacturing (AM)).

Honors and Activities

- ❖ Featured article (slippery when dry) in University of North Dakota Discovery (2017).
- ❖ Awarded IIM/ASM lectureship (Invited lectures in IISc, NIT Dimapur, ASM Pune Chapter).
- ❖ Lifetime membership in American Society of Metals (ASM), American Ceramics Society (ACerS), and Indian Institute of Metals (IIM).
- ❖ Featured scholar of the month in University of North Dakota (May, 2016).
- ❖ The Dean's Outstanding Faculty Award (May 2016).
- ❖ Nominated for Outstanding Undergraduate Teaching Award (2015).
- ❖ Nominated for Outstanding Research and Service Award (Faculty Scholar) (2015).
- ❖ Nominated for Outstanding Faculty Award (2015).
- ❖ Member of the Robert L. Coble Award for Young Scholars Committee of the American Ceramics Society.
- ❖ Global Young Investigator Award (GYIA) from Engineering Ceramics Division of the American Ceramics Society (2015).
- ❖ Secretary Engineering Ceramics Division (ECD) of American Ceramic Society (ACerS).
- ❖ Panel reviewer for NSF Materials Engineering and Processing (MEP) Program, May 22, 2014.
- ❖ Selected for inclusion in the Academic Keys Who's Who in Engineering Higher Education (WWEHE).
- ❖ "Nominated as a Future Leader in Materials Science and Engineering by the American Ceramic Society", Ceramic Leadership Summit and the Future Leader's Program, April 7-9, Baltimore, MD (2014).
- ❖ Senior Design Team won the Outstanding Senior Process Design Award for the Poster Titled, Intelligent Design of Ceramic Green Bodies for Smart Manufacturing" (2013, 2015).
- ❖ Nominated member of Sigma Xi, The Scientific Research Society, 2011.
- ❖ The best rating awarded for successful completion of project titled, "Thermomechanical Behavior of Honeycombs during Manufacturing", funded by Corning Incorporated (2008).
- ❖ Awarded Pennsylvania State University-Corning Inc. postdoctoral fellowship from 2006-2008 (\$40,000 per year).
- ❖ Research work on nanowires featured in the "Physics Update" section of the February

2005 issue of *Physics Today*. These research results were published in *Phy. Rev. Letts.*, **93** [2] (2004).

- ❖ Technical award by Honeywell International, Morristown, NJ (2005).
- ❖ Member of DAT (Disaster Action Team) for *American Red Cross* (2006-2007).
- ❖ Honorary Graduate Fellowship from Drexel University (over \$20,000.00 per year) from 2001-2006.

Patents

1. "Method of fabricating lignin based polymeric systems", S. Gupta et. al. (patent pending).
2. "Porous Ceramic and Method of Making", S. Gupta (patent pending). (2013)
3. "Low Alkali Fly Ash Cement and Method of Making", S. Gupta and M. F. Faisal (patent granted) (2013).
4. "Aerated Composite Materials, Methods of Production and Uses Thereof" (patent pending) (2013)
5. "Bonding Element, Bonding Matrix, and Composite Materials having the Bonding Element, and Method of Manufacturing Thereof", R. R. Riman, S. Gupta, V. Atakan, and Q. Li. (International Patent Submitted in several countries) (Publication Number – US20130122267 A1 – Filing Date, Mar 2, 2012)
6. "Ternary carbide and nitride materials having tribological applications and methods of making same", S. Gupta, T. Palanisamy, M.W. Barsoum and C.W. Li, (U.S Patent 755,3564 B2, June 30, 2009).
7. "Ternary carbide and nitride composites having tribological applications and methods of making same", T. Palanisamy, S. Gupta, C. W. Li and M. W. Barsoum, (US Patent 757,2313 B2, Aug. 11, 2009).

Invited Presentations

1. "A Review of Collaborative Materials Research at the University of North Dakota", University of Missouri, Kansas City (2018).
2. "Collaborative Materials Research at the University of North Dakota", Indian Institute of Science, India (2018).
3. "Designing novel strategies for enhancing materials education for undergraduate students", 3rd Pacific Rim Engineering Ceramics Summit, Current Trends and Future Directions II, 41th International Conference and Exposition on Advanced Ceramics and Composites (2017).
4. "Current Progress in the Design of Multifunctional Sustainable Materials", Mini Symposium on Bio-based Materials & Biocomposites Thursday, September 15th, NDSU (2016).
5. "Surface Characterization for Understanding the Tribology of Polymer Matrix Composites (PMCs) Fabricated by Additive Manufacturing", MS&T 2016, Salt Lake City, Oct 23-27 (2016).
6. "On the Design and Characterization of Novel MRM (MAX Reinforced Metals)", HTC9 and GFMAT, Jun 26 – Jul 1, Toronto (2016).
7. "On the Design of Novel Structural Materials for Multifunctional Applications", International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Fl (2015) (Invited).
8. On the Development of Novel Structural Materials for Multifunctional Applications, Army Research Lab (ARL) (2015).
9. Characterizing Tribofilms for Understanding Tribological Behavior of MAX Phases: Surojit Gupta, University of North Dakota, MS&T 2015, Columbus, Ohio.
10. Design Paradigm for Creating Novel Multifunctional Materials, NASA Glenn Research Center, Jun, 2015.

11. Current Progress in the Development of Next Generation Green Manufacturing Technologies (Invited), 39th International Conference and Exposition on Advanced Ceramics and Composites, Jan 25-30, 2015.
12. M. F. Riyad; S. Gupta "On the development of next generation green manufacturing technologies" S. Gupta, M. F. Riyad, T. Hammann, and R. Johnson, Green Technologies for Materials Manufacturing and Processing VI – Green Materials Processing III, MS&T 14, David L. Lawrence Convention Center, October 12-16, 2014, Pittsburgh, PA.
13. "On the development of green functional materials", Henan Polytechnic University, China, Aug, 2014.
14. "Tribology of Novel MAXMET Composites", S. Gupta, 5th International Congress on Ceramics, Beijing (Aug 17-21) (*Keynote Talk*), 2014.
15. "Current Progress in the "Greening" of Ceramic Manufacturing", Surojit Gupta, M. F. Riyad, T. Hammann, and R. Johnson, 5th International Congress on Ceramics, Beijing (Aug 17-21), 2014.
16. "Current progress in the greening of ceramics manufacturing", Surojit Gupta, M. F. Riyad, T. Hammann, and R. Johnson, UND-NDSU-SDSU Joint Symposium on Materials Science and Engineering (Sep, 2014).
17. "Current understanding about the Tribology of MAX Phases and Their Composites, Gordon Research Seminar (GRS), Bentley University, Waltham, MA, July 19-20, 2014.
18. "A Review of the Tribology of MAX Phases and Their Composites", 13th Ceramics Congress, Monte Catini Terme, Italy, CIMTEC, June 8-13, 2014.
19. "On the Development of Novel Advanced Multifunctional Structural Materials, Tata Institute of Fundamental Research, Colaba, Mumbai, India, Jan 4, 2014.
20. "Hydrothermal Processing for High Performance Building and Infrastructure Materials ", R. E. Riman, S. Gupta, Q. Li, V. Atakan, C. Vakifahmeoglou, J. Krishnan, M. A. Wassel, L. Tang, L. McCandlish, N. Decristofaro, ICMAT 2013, Suntec, Singapore (2013) (*Key Note Talk*).
21. "Development of Novel Structural Materials", S. Gupta, Physics Department, University of North Dakota, Feb 22, 2013.
22. "Novel Structural Materials developed by CO₂ Sequestration of Mineral Silicates", S. Gupta, Q. Li, L. Tang, V. Atakan, and R. E. Riman, 3rd International Solvothermal and Hydrothermal Association Conference (ISHA 2013), Jan 13-17, Texas, Austin.
23. "Carbonate Concrete: A Hydrothermal Technology for CO₂ Utilization and Construction", S. Gupta, Q. Li, L. Tang, V. Atakan, and R. E. Riman, 3rd International Solvothermal and Hydrothermal Association Conference (ISHA 2013), Jan 13-17, Texas, Austin.
24. "Novel Structural Materials", S. Gupta, Sep 20, 2012, Great River Energy.
25. "Applications of Hydroxyapatite Thermochemistry to Biomaterials Synthesis", R. E. Riman, C. Mossad, A. Petersson, and S. Gupta, MS&T 2010, Houston.
26. "Thermomechanical Properties of Honeycombs during Manufacturing" S. Gupta, D J. Green, and G L. Messing, Corning Inc., June, 2006.

Confidential Reports

1. "Thermomechanical behavior of honeycombs during manufacturing", Annual Reports submitted to Corning Incorporated (2007 and 2008).
2. "Progress report on development of triboactive materials for foil bearings", Annual Report submitted to ONR (Contract # N00421-03-C-0085, 2005).

Book Chapter

1. "A Perspective on the Green Body Fabrication and Design for Sustainable Manufacturing", S. Gupta, Book Chapter in Green and Sustainable Manufacturing of Advanced Materials, Elsevier (Invited) (2015).

An h-index of 25 with total citations over 1300

Scientific studies published after joining University of North Dakota (currently, various publications are in different stages of preparation):

2018

1. **"Beneficial usage of recycled polymer particulates for designing novel 3D printed composites"**, R. Dunnigan, J. Clemens, M. N. Cavalli, N. Kaabouch, and S. Gupta, *Prog Addit Manuf* (2018) 3: 33. <https://doi.org/10.1007/s40964-018-0046-2>.
2. **"Synthesis and Characterization of Novel Foams by Pyrolysis of Lignin"**, S. Gupta, M. Dey, C. Matzke, G. Ellis, S. Javaid, K. Hall, Y. Ji and S. Payne, *Tappi Journal*, Special Issue on Lignin (Accepted).
3. **"Synthesis of MoAlB Particulates and Their Porous Derivatives by Selective Deintercalation of Al from MoAlB"**, S. Gupta, M. Fuka, In: Sun Z. et al. (eds) *Energy Technology 2018*. TMS 2018. The Minerals, Metals & Materials Series. Springer, Cham (2018).

2017

4. **"Synthesis and tribological behavior of novel Ag- and Bi-based composites reinforced with Ti₃SiC₂"**, F. AlAnazi, S. Ghosh, R. Dunnigan, S. Gupta, *Wear* **376-377** 1074–1083 (2017) (Impact Factor – 2.323).

2016

5. **"Novel solid-lubricant materials for multifunctional applications"**, S. Gupta, M. F. Riyad, S. Ghosh, and R. Dunnigan, *SPE Plastic Research Online*, 10.2417/spepro.006444 (Invited) (online publication of Society of Plastic Engineers).
6. **"Synthesis and Tribological Behavior of Ultra High Molecular Weight Polyethylene (UHMWPE)-Lignin Composites"**, S. Gupta, M. F. Riyad, and Y. Ji *Lubricants* 2016, 4(3), 31; doi:10.3390/lubricants4030031 (Invited) (Prof. Dr. James E. Krzanowski, Editor-in-Chief, Department of Mechanical Engineering, University of New Hampshire).
7. **"On the synthesis and tribological behavior of PEEK-Ti₃SiC₂ composites during self-mating"**, *Journal of Engineering Tribology*, 1-7 (2016) (Impact Factor – 0.660).
8. **"Synthesis and Tribological Behavior of Novel UHMWPE-Ti₃SiC₂ Composites"**, S. Gupta*, and M. F. Riyad, *Polym. Compos.*, 1548-1569 (2016) (Impact Factor: 2.324).
9. **"Reactive Hydrothermal Liquid Phase Densification (rHLPD) - A New Densification Process for Ceramic Composites"**, C. Vakifahmetoglu et al. Accepted in *J. Amer. Soc.*, (Collaboration with Rutgers, State University of New Jersey- the work was started when Dr. Gupta was an employee of Rutgers University) (Impact Factor – 2.787).
10. **"A Novel Strategy of Carbon Capture and Sequestration by r-HLPD Processing"**, Q. Li, S. Gupta, L. Tang, V. Atakan, and R. E. Riman, *Frontiers of Energy*, Collaboration with Rutgers, State University of New Jersey- the work was started when Dr. Gupta was an employee of Rutgers University.

2015

11. **"Synthesis and Characterization of Ti₃SiC₂ Particulate-Reinforced Novel Zn Matrix Composites"**, Journal of Materials Engineering and Performance, **24**, 4071-4076 (2015) (ASM International Journal published by ASM with an Impact Factor of 1.09).
12. **"Novel Al matrix Composites Reinforced with Ti₃SiC₂ (nanolaminates) Particulates"**, S. Gupta, T. Hammann, R. Johnson, and M.F.Riyad, J. Mat. Eng. Perf. **24**, 1011-1017 (2015)(ASM International Journal published by ASM with an Impact Factor of 1.09).
13. **"Novel Self Lubricating Ti₃SiC₂ (Natural Nanolaminates) Reinforced Epoxy Composites"**, S. Gupta, S. Gupta, T. Hammann, R. Johnson, and M.F.Riyad, Tribology Transactions, **58** (2015) (Impact Factor - 1.685 - STLE publication).

(2012-2014)

14. **"Oxidation-induced Sintering: An Innovative Method for Manufacturing Porous Ceramics"**, S. Gupta and M. F. Riyad, International Journal of Applied Ceramic Technology, Article first published online: 3 Jul 2014, DOI: 10.1111/ijac.12282 (Impact Factor - 1.53 - American Ceramics Society publication).
15. **"Synthesis and Characterization of Novel Ti₃SiC₂-BN Composites"**, Z. Li, A. Zhou, L. Li, L. Wang, S. Li, and S. Gupta, Diamond & Related Materials **43**, 29-33 (2014) (Impact Factor - 2.56).

Previous Publications:

2010 and 2011

16. **"On the Tribology of MAX Phases and Their Composites - A Review"**, S. Gupta and M. W. Barsoum, Wear **271** (2011) 1878- 1894.
17. **"Thermomechanical Behavior of Ceramic Green Bodies during Pre-sintering"**, S. Gupta, D.J. Green, G.L. Messing and I. Peterson, J. Am. Cer. Soc., **93** [9] 2611-2616 (2010).

2009

18. **"On the compression behavior of Ti₂InC, (Ti_{0.5}, Zr_{0.5})₂InC, and M₂SnC (Nb, Hf) at quasi-hydrostatic pressures above 50 GPa"**, Bouchaib Manoun, O. Leaffer, S. Gupta, E.N. Hoffman, S.K. Saxena and M.W. Barsoum, Solid State Communications, **149** [43-44] 1978-1983 (2009).
19. **"Study of tribofilms formed during dry sliding of Ta₂AlC/Ag or Cr₂AlC/Ag composites against Ni-base superalloys and Al₂O₃"**, S. Gupta, D. Filimonov, V. Zaitsev, T. Palanisamy, T. El-Raghy, M.W. Barsoum, Wear **267**, 1490-1500 (2009).
20. **"Effect of applied load and surface roughness on the tribological properties of Ni-based superalloys versus Ta₂AlC/Ag or Cr₂AlC/Ag composites"**, D. Filimonov, S. Gupta, T. Palanisamy and M.W. Barsoum, Tribol. Lett. **33**, 9-20 (2009).

21. "Thermal expansion of select $M_{n+1}AX_n$ (M=early transition metal, A=A group element, X=C or N) phases measured by high temperature x-ray diffraction and dilatometry", T.H. Scabarozzi, S. Amini, O. Leaffer, A Ganguly, S. Gupta, W. Tambussi, S. Clipper, J.E. Spanier, M.W. Barsoum, J.D.Hettinger and S.E. Lofland, J. App. Phys. **105**, 013543 (2009).

2008

22. "Synthesis and elastic mechanical properties of Cr_2GeC ", S. Amini, A. Zhou, S. Gupta, A. DeVillier, P. Finkel and M. W. Barsoum, J. Mater. Res. **23**, 2157-2165 (2008).

23. "Tribological behavior of select MAX phases against Al_2O_3 at elevated temperatures", S. Gupta, D. Filimonov, T. Palanisamy and M. W. Barsoum, Wear **265**, 560-565 (2008).

24. "Ambient and 550 °C tribological behavior of select MAX phases against Ni-based superalloys", S. Gupta, D. Filimonov, V. Zaitsev, T. Palanisamy and M. W. Barsoum, Wear **264**, 270-278 (2008).

2007

25. "On the Raman scattering from selected M_2AC compounds", O. D. Leaffer, S. Gupta, M. W. Barsoum and J. E. Spanier, J. Mater. Res., **22** [10] 2651-2654 (2007).

26. "On the compression behavior of Cr_2GeC and V_2GeC up to quasi-hydrostatic pressures of 50 GPa", M. Bouchaib, A. Sharam, S. Gupta, S. K. Saxena and M. W. Barsoum, J. Phy. Cond. Mat., **19** (2007).

27. "Tribological Behavior of Ti_2SC at Ambient and Elevated Temperatures", S. Gupta, D. Filiminov, T. Palanisamy, T. El-Raghy and Michel. W. Barsoum, " J. Amer. Cer. Soc., **90** [11] 3566-3571 (2007).

28. " Ta_2AlC and Cr_2AlC Ag-based composites - New solid lubricant materials for use over a wide temperature range against Ni-based superalloys and alumina", S. Gupta, D. Filimonov, T. Palanisamy, T. El-Raghy and M. W. Barsoum, Wear, **262** 1479-1489 (2007).

29. "On the compression behavior of $(Ti_{0.5}, V_{0.5})_2AlC$ and $(Ti_{0.5}, Nb_{0.5})_2AlC$ to quasi-hydrostatic pressures above 50 GPa", B. Manoun, F. Zhang, S. K. Saxena, S. Gupta and M. W. Barsoum, J. Phys: Condensed Matter, **19** 246215 (2007).

30. "High-Temperature Thermal Expansion and Stability of V_2AlC Up To 950°C", S. R. Kulkarni, M. Merlini, N. Phatak, S. K. Saxena, G. Artioli, S. Gupta and M. W. Barsoum, J. Amer. Cer. Soc., **90** [9] 3013-3016 (2007).

2006

31. "Corrosion behavior of select MAX phases in NaOH, HCl and H_2SO_4 ", V. D. Jovic, B. M. Jovic, S. Gupta, T. El-Raghy and M. W. Barsoum, Cor. Sci. **48** 4274-4282 (2006).

32. "Isothermal oxidation of Ta_2AlC in air", S. Gupta, D. Filiminov and M. W. Barsoum, J. Am. Ceram. Soc. **89** [9] 2974-2976 (2006).

33. **"High-temperature oxidation of Ti_3GeC_2 and $Ti_3Ge_{0.5}Si_{0.5}C_2$ in air"**, S. Gupta, A. Ganguly, D. Filiminov and M. W. Barsoum, J. Electrochem. Soc., **153** [7] J 61-J 68 (2006).
34. **"Synthesis and oxidation of Ti_2InC , Zr_2InC , $(Ti_{0.5},Zr_{0.5})_2InC$ and $(Ti_{0.5},Hf_{0.5})_2InC$ in air"**, S. Gupta, E. N. Hoffman and M. W. Barsoum, J. Alloys and Comp., **426** [1-2] 168-175 (2006).
35. **"Electron-phonon coupling in $M_{n+1}AC_n$ phases"**, S. E. Lofland, J. D. Hettinger, T. Meehan, A. Bryan, P. Finkel, S. Gupta, M. W. Barsoum and G. Hug, Phys. Rev. B, **74** 1 (2006).
36. **"On the heat capacities of M_2AlC ($M = Ti, V, Cr$) ternary carbides"**, M. K. Drulis, H. Drulis, S. Gupta, M. W. Barsoum and T. El-Raghy, J. App. Phys., **99** [9] 093502 - 093505 (2006).
37. **"Compression behavior of M_2AlC ($M = Ti, V, Cr, Nb$, and Ta) phases to above 50 GPa"**, B. Manoun, R. P. Gulve, S. K. Saxena, S. Gupta, M. W. Barsoum and C. S. Zha, Phys. Rev. B **73**, 024110 (2006).

2005

38. **"Tribology of Ti_3SiC_2 and its derivatives "**,S. Gupta, Z. M. Sun, M.W.Barsoum, E. Passman, T. Palanisamy and C. W. Li , Proceedings of World Tribology Congress III, September 12 - 16, 2005.
39. **"Vibrational behavior of the $M_{n+1}AX_n$ phases from first-order Raman scattering ($M = Ti, V, Cr; A = Si; X = C, N$)"**, Spanier, J. E., Gupta, S., Amer, M. and Barsoum, M. W., Phys. Rev. B, **71** 012103 (2005).
40. **"Spontaneous growth of freestanding Ga nanoribbons from Cr_2GaC surfaces"**, Sun, Z. M., Gupta, S., Ye, H. and Barsoum, M. W., J. Mater. Res., **20** [10] 2618-2621 (2005).
41. **"Electrical transport, thermal transport, and elastic properties of M_2AlC ($M = Ti, Cr, Nb$ and V)"**, Hettinger, J. D., Lofland, S. E., Finkel, P., Meehan, T., Palma, J., Harrell, K., Gupta, S., Ganguly, A., El-raghy, T. and Barsoum, M. W., Phys. Rev. B, **72** 115120 (2005).

2004

42. **"Synthesis and Oxidation of V_2AlC and $(Ti_{0.5},V_{0.5})_2AlC$ in Air"**, S. Gupta and M. W. Barsoum, J. Elec. Soc., **151** [2] (2004).
43. **"Driving force and mechanism for spontaneous metal whisker formation"**, M.W.Barsoum, E. N. Hoffman, R. D. Doherty, S. Gupta and A. Zavalingos, Phy. Rev. Letts, **93** [20] 206104 (2004).
44. **"Elastic and electronic properties of select M_2AX phases"**, S. E. Lofland, J. D. Hettinger, K. Harrell, P. Finkel, S. Gupta, M. W. Barsoum, and G. Hug Appl. Phys. Lett., **84** 508 (2004).

Undergraduate work

45. **"Easy-to-use mullite and spinel sols as bonding agents in a high-alumina based ultra low cement castable"**, S. Mukhopadhyay, S. Ghosh, M. Mahapatra, R. Mazumdar, P. Barick, S. Gupta and S. Chakraborty, Cer. Inter., **28** 719-729 (2002).

46. **"Enhanced room-temperature magnetoresistance in $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ -glass composites"**, S. Gupta, R. Ranjit, C. Mitra, P. Raychaudhuri and R. Pinto. *Appl. Phys. Lett.*, **78** 362 (2001).

Peer Reviewed
Contributed
Proceedings
and Other Papers

1. **"Effect of Ti_3SiC_2 particulates on the mechanical and tribological behavior of Sn matrix composites on the mechanical and tribological behavior of Sn matrix composites"**, T. Hammann, R. Johnson, M. F. Riyad, and S. Gupta, 39th International Conference and Exposition on Advanced Ceramics and Composites, Jan 25-30, 2015.
2. **"On the Usage of Class C Fly Ash as a Sole Reactive Precursor for Cementitious Phase"**, M. F. Riyad, ; S.Gupta, : *Journal of Chemical and Biological Interfaces*, **2**, 55-60 (2014).
3. **"Novel Engineered Cementitious Materials by Using Class C Fly Ash as a cementitious phase"** M. F. Riyad, M. Fuka, R. Lofthus, Q. Li, N. M. Patel, and S. Gupta, *Ceramics Transaction, MS&T 2015*, Columbus, Ohio.
4. **"Tribology study of novel Ti_3SiC_2 matrix composites reinforced with ceramics particulates"**, J. Nelson, M. Olson, and S. Gupta, 41th International Conference and Exposition on Advanced Ceramics and Composites (2017).
5. **"Synthesis and tribological behaviour of Bi- Cr_2AlC composites"**, F. AlAnazi, S. Ghosh, R. Dunnigan, and S. Gupta, 41th International Conference and Exposition on Advanced Ceramics and Composites (2017).
6. **"Synthesis and characterization of Novel Ni- Ti_3SiC_2 Composites"**, M. Dey, M. Fuka, F. AlAnazi, and S. Gupta, *Ceramic Engineering and Science Proceedings (CESP)*, **39** (2018).
7. **"Novel Ternary Boride (MoAlB) Particulates as Solid Lubricant Additives in Ni-matrix Composites (AIAA 2018-4893)"** Matt Fuka, Maharshi Dey, Surojit Gupta, AIAA/SAE/ASME Joint Propulsion Conference, Cincinnati, Ohio, USA, 9 - 11 July 2018 .

Contributed
Presentations

1. **"On the Design of Novel MAX Reinforced Ni-matrix Composites"**, Maharshi Dey, Matt Fuka, Surojit Gupta, Columbus, MS&T (2018).
2. **"On the Design of Novel Lignin Based Green Materials"**, Kathryn Hall, Maharshi Dey, Yun Ji, Surojit Gupta, Columbus, MS&T (2018).
3. **"On the Design of Novel Particulates from MAX Phases"**, Surojit Gupta, Columbus, MS&T (2018).
4. **"On the Design of Novel Structural Materials for Multifunctional Applications"**, CMCEE Singapore, 12th International Conference on Ceramic Materials and Components for Energy and Environmental Application, 22-27 July 2018.
5. **"Synthesis and Tribological Behavior of MoAlB Phase based Composites"**, CMCEE Singapore, 12th International Conference on Ceramic Materials and Components for Energy and Environmental Application, 22-27 July 2018.
6. **"Design of Novel Solid Lubricant Materials by Using MAX and MAB Phases"**, S. Gupta, 73rd STLE Annual Meeting and Exhibition, May 20-24, 2018, Minnesota, USA.
7. **"Synthesis and Characterization of Novel MAX Reinforced Ceramics (MAXCERs)"**, 73rd STLE Annual Meeting and Exhibition, May 20-24, 2018, Minnesota, USA.
8. **"Current Progress in Advanced Materials Research"**, S. Gupta, 42nd International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach (2018).

9. **“(ICACC-S12-011-2018) A Review of Different Types of MAX-Metal Composite Systems for Multifunctional Applications**, M. Dey, M. Fuka, S. Gupta, 42nd International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach (2018).
10. **“(ICACC-S8-014-2018) Synthesis and characterization of novel lignin based composites”**, K. Hall, Y. Ji, S. Gupta, 42nd International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach (2018).
11. **“(ICACC-S12-015-2018) Synthesis and Characterization of Novel Ni-MAB composites”**, M. Fuka, M. Dey, S. Gupta, 42nd International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach (2018).
12. **“Design of Novel Ni-Ti₃SiC₂ based Multilayered Composites”**, Q. Tran, M. Fuka, M. Dey, S. Gupta, 42nd International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach (2018).
13. **“Current Progress in Designing Novel Sustainable and Functional Materials”**, S. Gupta, GLRM, June 27-20, Fargo (2017).
14. **“Design of Novel Composites by Using “MAB” Phases as a Functional Constituent”**, M. Fuka, F. Al-Anazi, M. Dey, and S. Gupta, Advances in Functional Materials, UCLA, 14-17 Aug (2017).
15. **“Novel Methods for Designing 2D (MXene) Particulates”**, S. Gupta et al., Advances in Functional Materials, UCLA, 14-17 Aug (2017).
16. **Synthesis and Tribological Behavior of Novel Ag- and Bi-based Composites Reinforced with Ti₃SiC₂**, F. AlAnazi, R. Dunnigan, S. Ghosh and S. Gupta, Wear of Materials, Long Beach, CA, 26-30 March (2017).
17. **“A Review of Next Generation Green and Smart Manufacturing Technologies”**, S. Gupta, 12th Pacific Rim Conference on Ceramic and Glass Technology (PACRIM 12), including Glass & Optical Materials Division Meeting (GOMD 2017), May 21-26 (2017).
18. **“On the development of novel MAXCER (MAX-Ceramics) Composites for Multifunctional Applications”**, J. Nelson, S. Gupta, 12th Pacific Rim Conference on Ceramic and Glass Technology (PACRIM 12), including Glass & Optical Materials Division Meeting (GOMD 2017), May 21-26 (2017).
19. **“On the Development of Novel MAX Reinforced Metal (MRM) Composites”**, F. AlAnazi, S. Gupta, 12th Pacific Rim Conference on Ceramic and Glass Technology (PACRIM 12), including Glass & Optical Materials Division Meeting (GOMD 2017), May 21-26 (2017).
20. **“Towards Developing Comprehensive Understanding about Tribological Behavior of MAX Reinforced Metal (MRM) Composites”**, F. Al-Anazi; S. Ghosh; S. Gupta, 41th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2017).
21. **“Tribological Behavior of PLA and ABS-Based Polymer Matrix Composites Fabricated by Fused Deposition Modeling Process”**, S. Gupta; M. Fuka; R. Dunnigan; M. C.

- Halbig; M. Singh; 41th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2017).
22. **"On the design of novel polymer matrix composites (PMCs) by Stereolithography (SL)"**, D. Blue, E. Kramer, L. Yutrzecka, R. Larson, R. Dunnigan, S. Gupta, 41th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2017).
 23. **"Tribology of Ti₃SiC₂ Reinforced Polymer Matrix Composites (PMCs) fabricated by Additive Manufacturing"**, R. Dunnigan, M. Fuka, S. Gupta, 41th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2017).
 24. **"On the Design of MAX-Polymer (MAXPOL) Multifunctional Composites"**, S. Ghosh; M. Fuka; F. Al-Anazi; S. Gupta, 41th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2017).
 25. **"Recent Studies to Understand the Tribology of MAX Phases, MAXPOLs, and MRM (MAX Reinforced Metals)"**, Surojit Gupta, MS&T 2016, Salt Lake City, Oct 23-27 (2016).
 26. **"On the Development of Novel Multifunctional MAXPOL Composites"**, *Sujan Ghosh*, Surojit Gupta, MS&T 2016, Salt Lake City, Oct 23-27 (2016).
 27. **On the Development of MRMs (MAX Reinforced Metals) for Multifunctional Applications**: Faisal AlAnazi, Sujan Ghosh, Surojit Gupta, MS&T 2016, Salt Lake City, Oct 23-27 (2016).
 28. **"Novel Structural Ceramics by Microstructure Design"**, S. Gupta, A. Stoker, J. Steen, W. Steidl, Q. Tran, T. Gorrion, E. Downward, HTC9 and GFMAT, Jun 26 – Jul 1, Toronto (2016).
 29. **"Recent Developments in the Design of MAX Polymer (MAXPOL) Multifunctional Composites"**, S. Ghosh, R. Dunnigan, F. AlAnazi, S. Gupta, HTC9 and GFMAT, Jun 26 – Jul 1, Toronto (2016).
 30. **"3D Printing of MAX Reinforced Composites"**, R. Dunnigan¹; S. Ghosh¹; F. AlAnazi¹; S. Gupta, HTC9 and GFMAT, Jun 26 – Jul 1, Toronto (2016).
 31. **"Current Progress in the Development of MAX Phase Based Solid Lubricant Materials"**, STLE, Las Vegas (2016).
 32. **"Novel MAX-Polymer Multifunctional Composites"**, S. Ghosh, R. Dunnigan, M. Habib, S. Gupta, 40th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2016).
 33. **On the Development of MAX Reinforced Metal Matrix Composites**, M. Habib, R. Dunnigan, S. Ghosh, S. Gupta, 40th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2016).
 34. **"Development of Novel Additive Manufacturing (AM) Practices"**, R. Dunnigan, S. Ghosh¹, M. Habib, S. Gupta, 40th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2016).
 35. **"Tribology of Polymer Matrix Composites (PMCs) fabricated by Additive Manufacturing"**, S. Gupta, R. Dunnigan, A. Salem, L. Kuentz, M. C. Halbig, M. Singh, 40th

- International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2016).
36. **“Novel Metal Matrix Multifunctional Materials by Ti_3SiC_2 Reinforcements”**, Md. Ahsan Habib, R. Dunnigan, S. Ghosh, S. Gupta, MS&T 2015, Columbus, Ohio.
 37. **“Design of Novel Green Manufacturing Technologies”**, S. Gupta, M. F. Riyad, R. Dunnigan, MS&T 2015, Columbus, Ohio.
 38. **“Novel MAX Phase Reinforced Soft Metal Composites”**, S. Ghosh, R. Dunnigan, Md. Ahsan Habib, S. Gupta, MS&T 2015, Columbus, Ohio.
 39. **“Manufacturing of Novel MAX-Polymer (MAXPOL) Multifunctional Composites”**, R. Dunnigan, M. F. Riyad, Surojit Gupta, MS&T 2015, Columbus, Ohio.
 40. **“ On the Development of Novel MRM (MAX Reinforced Metal) Multifunctional Materials”**, S. Gupta, D. Ross, 11th International Conference on Ceramic Materials and Components for Energy and Environmental Applications, Vancouver, June 14-19, 2015.
 41. **“Novel Engineered Cementitious Materials by Class C Fly Ash”**, S. Gupta, M. F. Riyad, Q. Li, 11th International Conference on Ceramic Materials and Components for Energy and Environmental Applications, Vancouver, June 14-19, 2015.
 42. **“ Novel Solid Lubricant for Multifunctional Applications”**, S. Gupta, 11th International Conference on Ceramic Materials and Components for Energy and Environmental Applications, Vancouver, June 14-19, 2015.
 43. **“Potential of Ceramics based Materials to Ameliorate Corrosion Issues in Petrochemical Refinery Components: A Review”**, M. Hassan, S. Gupta, 11th International Conference on Ceramic Materials and Components for Energy and Environmental Applications, Vancouver, June 14-19, 2015.
 44. **“A Perspective on the Green Body Fabrication and Design for Sustainable Manufacturing”**, S. Gupta, 11th International Conference on Ceramic Materials and Components for Energy and Environmental Applications, Vancouver, June 14-19, 2015.
 45. **“Tribology of Multifunctional Self Lubricating MAX-Polymer (MAXPOL) Composites”**, S. Gupta, STLE 70th Annual Meeting & Exhibition, Dallas Texas - Omni Hotel - May 17 - 21, 2015.
 46. **“Tribology of MAX Phase Reinforced Novel Soft Metal Composites”**, R. Dunnigan, S. Gupta, T. Hammann, STLE 70th Annual Meeting & Exhibition, Dallas Texas - Omni Hotel - May 17 - 21, 2015.
 47. **“Effect of Nanolaminate (Ti_3SiC_2) additives on the “Soft” Metals”**, T. Hammann; R. Johnson, S. Gupta, 39th International Conference and Exposition on Advanced Ceramics and Composites, Jan 25-30, 2015.
 48. **“Novel Ti_3SiC_2 Reinforced Metal Matrix Multifunctional Materials”**, R. Johnson, T. Hammann, S. Gupta, 39th International Conference and Exposition on Advanced Ceramics and Composites, Jan 25-30, 2015.

49. **“Developing novel strategies for enhancing materials education”**, S. Gupta, D. Bose, M. Cavalli, 39th International Conference and Exposition on Advanced Ceramics and Composites, Jan 25-30, 2015.
50. **“Recent Studies to Understand the Tribology of MAX Phases and Their Composites”**, S. Gupta, 39th International Conference and Exposition on Advanced Ceramics and Composites, Jan 25-30, 2015.
51. **“Novel Methods for Manufacturing Porous Ceramics”**, M Riyad, T. Hammann, R. Johnson, S. Gupta, MS&T 2014, Pittsburgh, Oct 12-16, 2014.
52. **“Novel MAX (Nanolaminates) -Al (Aluminum) Multifunctional Composites”**, T. Hammann, S. Gupta, R. Johnson, M. Riyad, MS&T 2014, Pittsburgh, Oct 12-16, 2014.
53. **“The Role of Tribofilms on the Tribology of MAX Phases”** S. Gupta, MS&T 2014, Pittsburgh, Oct 12-16, 2014.
54. **“On the Development of Novel Light Weight Multifunctional Composites”**, R Johnson, T. Hammann, M Riyad, S. Gupta, MS&T 2014, Pittsburgh, Oct 12-16, 2014.
55. **“Novel Low Alkali Fly Ash Cement”**, S. Gupta and M. F. Riyad, 13th Ceramics Congress, Montecatini Terme, Italy, CIMTEC, June 8-13, 2014.
56. **“Development of Novel MAX-Al Composites”** T. Hammann*, R. Johnson*, M. F. Riyad, S. Gupta, University of North Dakota, USA. 2014 Scholarly Forum, University of North Dakota (2014).
57. **“The Importance of Tribofilms on the Tribological Behavior of Layered Nanolaminates (MAX Phases)”**, S. Gupta, 38th International Conference and Expo on Advanced Ceramics and Composites. Daytona Beach, Fl. (2014) **(ICACC-GYIF-014-2014)**.
58. **“On the Development of Novel MAX-Al Composites”** T. Hammann, R. Johnson, M. F. Riyad, S. Gupta, 38th International Conference and Expo on Advanced Ceramics and Composites. Daytona Beach, Fl. (2014).
59. **“Tribology of Novel MAX-Al Composites”** R. Johnson, T. Hammann, M. F. Riyad, S. Gupta, 38th International Conference and Expo on Advanced Ceramics and Composites. Daytona Beach, Fl. (2014).
60. **“Novel Green Manufacturing Technologies”** S. Gupta, M. F. Riyad, T. Hammann, R. Johnson, 38th International Conference and Expo on Advanced Ceramics and Composites. Daytona Beach, Fl. (2014) **(ICACC-S8-068-2014)**.
61. **“Novel Processing Methods for Developing Porous Oxides and Carbide Ceramics”** M. F. Riyad*, R. Johnson, T. Hammann, S. Gupta, 38th International Conference and Expo on Advanced Ceramics and Composites. Daytona Beach, Fl. (2014).

62. **"Novel low alkali activated fly ash cement (LAFAC)"**, S. Gupta, M. F. Riyad, 246th ACS National Meeting and Exposition September 8-12, 2013, Indianapolis, Indiana.
63. **"A perspective on the tribology of MAX Phases"**, S. Gupta, 40th Biennial Great Lakes Regional Meeting, June 5-8, 2013.
64. **"Novel Methods for Understanding the Manufacturing of Inorganic Materials"**, S. Gupta, 40th Biennial Great Lakes Regional Meeting, June 5-8, 2013.
65. **"On the Development of Novel Cementitious Materials"**, S. Gupta, M. F. Riyad, R. Johnson, T. Hammann, 4th Advances in Cement-based Materials, Urbana, IL, July 8, 2013.
66. **"Novel Methods for Manufacturing Porous Materials"** S. Gupta, M. F. Riyad, R. Johnson, and T. Hammann, 12th International Conference on Ceramic Processing Science, Portland, Aug 4-7, 2013.
67. **"Carbonate Ceramics and Concrete: A Disruptive Technology for CO₂ Utilization and the Construction Business"**, R. E. Riman, S. Gupta, Q. Li, V. Atakan, C. Vakifahmetoglu, J. Azurdia, J. Krishnan, M. A. Bitteto, L. Tang, J. Czerepiniski, L. E. Mc Candish, and N. Decristofaro, AIChE Annual Meeting, Pittsburgh, PA, Oct 28- Nov 2, 2012.
68. **"Multi length-scale interrogation of uniformity of composite materials through theory and experiment"**, J. Kohl, S. Gupta, & R. E. Riman, MS&T 2010.
69. **"Mechanical Characterization of Biomineralized HAP-Collagen Composites"**, S. Gupta, C. Mossad, A. Petersson, & R. E. Riman, MS&T 2010.
70. **"Synthesis, Microstructural Characterization, Mechanical Properties and Physical Properties of Nanolaminated Ternary Carbides"**, T. Scabarozi, S. Amini, O. Leafner, A. Ganguly, S. Gupta, W. Tambussi, S. Clipper, J. Spanier, M. W Barsoum, J.D. Hettinger, S.E. Lofland, MS&T 2009, Oct 25-29, Pittsburgh, PA.
71. **"Enhancing Toughness of Silicon Nitride with Nano-Sintering Aids "**, S. Santhanam, K. Jen, S. Gupta, R. Peddetti, S. Pasupuleti, 31st International Conference and Exposition on Advanced Ceramics and Composites, Jan 21-26, Daytona, Florida (2007).
72. **"Fabrication and Characterization of Cr₂GeC "**, S. Amini, M.W. Barsoum, S. Gupta, 31st International Conference and Exposition on Advanced Ceramics and Composites, Jan 21-26, Daytona, Florida (2007).
73. **"The effect of M (M=Ti, V) and A (A=Al, Ge) on thermal transport and heat Capacity of nanolayered ternary carbides M₂AC,"** A.P. Bryan, S.E. Lofland, J.D. Hettinger, P. Finkel, M.W. Barsoum, A. Ganguly, and S. Gupta American Physical Society, March, (2006).
74. **"The effect of M (M=Ti,Cr,V,Nb) on the transport and elastic properties of Nanolayered ternary carbides M₂AlC,"** J. Hettinger, P. Finkel, T. Meehan, S. Lofland, K. Harrell, M. Barsoum, A. Ganguly, S. Gupta, American Physical Society, March 2006.

Poster
Presentations

75. **"Ta₂AlC/Ag and Cr₂AlC/Ag Based Composite Systems for Foil Bearing Applications"**. S. Gupta, D. Filimonov, Tamer El-Raghy, T. Palanisamy, E. Passman, M. W. Barsoum MS&T 2006, Cincinnati, Ohio.
76. **"Characterization and Isothermal Oxidation of Ta₂AlC in Air."** S. Gupta, D. Filimonov, T. El-Raghy; M. W. Barsoum, MS&T 2006, Cincinnati, Ohio Synthesis.
77. **"Compression Behavior of (Ti,M)₂AlC (M = V, Nb) Under Quasi-Hydrostatic Pressure up to 52 GPa"**, B. Manoun, R. P. Gulve, S. K. Saxena, S. Gupta, M. W. Barsoum, C. S. Zha 29th Annual Cocoa Beach Meeting, Jan. 23-28, 2006, Cocoa Beach, FL.
78. **"Tribological Behavior of Ta₂AlC and Ta₂AlC/Ag"**, S. Gupta, D. Filimonov, T. El-Raghy, T. Palanisamy, E. Passman, M. W. Barsoum, 29th Annual Cocoa Beach Meeting, Jan. 23-28, 2006, Cocoa Beach, FL.
79. **"Tribological Behavior of Select MAX Phases during Sliding against a Ni-Based Superalloy and Alumina at 26°C and 550°C"** S. Gupta, D. Filimonov, T. El-Raghy; T. Palanisamy, M. W. Barsoum, MS&T 2006, Cincinnati, Ohio.
80. **"Tribological Properties of MAX phase"**, S. Gupta, Z.M. Sun, A. Ganguly, T. Palanisamy, E. Passman M. W. Barsoum and C. W. Li, 29th Annual Cocoa Beach Meeting, Jan. 23-28, 2005, Cocoa Beach, FL.
81. **"Tribology of Ti₃SiC₂ and its derivatives"**, S. Gupta, Z. M. Sun, M.W. Barsoum, E. Passman, T. Palanisamy and C. W. Li, World Tribology Congress, Sep 12-16 (2005).
82. **"The effect of M (M=Ti,Cr,V,Nb) on the transport and elastic properties of nanolayered ternary carbides M₂AlC,"** J. Hettinger, P. Finkel, T. Meehan, S. Lofland, K. Harrell, M. W. Barsoum, A. Ganguly, and S. Gupta, American Physical Society, March 2005.
83. **"Compressibility of M₂AlC (M = Ti, V, Cr, Nb and Ta) phases to above 50 GPa"**, Bouchaib Manoun, R. P. Gulve, S. K. Saxena, S. Gupta, M. W. Barsoum, and C. S. Zha SMEC 2005, April 17-21, 2005,.
84. **"First Order Raman Scattering from MAX Phases"**, J. S. Spanier, S. Gupta and M. W. Barsoum MRS Meeting Fall 2004.
85. **"Tribological and Wear Studies of MAX Phases and Its Composites"**, S. Gupta, Z. M. Sun, M. W. Barsoum, T. Palanisamy, E. Passman and C. W. Li, MRS Meeting Fall 2004.
86. **"Synthesis and Oxidation of Cr₂AlC and V₂AlC in Air"**, S. Gupta and M. W. Barsoum ECS, 203rd Meeting, Paris, France.
87. **"Synthesis and Oxidation Kinetics of Cr₂AlC in Air"**, S. Gupta and M. W. Barsoum American Ceramic Society, 105th Annual Meeting, Nashville, TN.
88. **"Synthesis and Oxidation kinetics of V₂AlC and (Ti,V)₂AlC in Air"**, S. Gupta and M. W. Barsoum, American Ceramic Society, 105th Annual Meeting, Nashville, TN.
89. **"Grain Boundary De-Wetting and Real Time Ostwald Ripening of Indium from Zirconium Indium Carbide"**, E N. Hoffman, S Gupta and Michel W. Barsoum 16th Fall

Meeting of The Ceramic Society of Japan & The 5th International Meeting of Pacific Rim Ceramic Societies(PacRim5).

90. **"Low Temperature Electrical and Thermal Transport Properties of the Natural Nanolaminate V_2AlC "**, J. D. Hettinger, P. Finkel, S. E. Lofland, M. W. Barsoum and S. Gupta, APS March Meeting, Texas, 2003.
1. **"On the design of novel engineered composites for multifunctional applications"**, A. Bosco; A. Holland; C. Borillo; S. Abualdam; S. Gupta, 42nd International Conference & Exposition on Advanced Ceramics & Composites, JANUARY 21-26, 2018, Daytona Beach, Florida, USA.
2. **"ICACC-GYIF-P061-2018) Design of Novel Multifunctional Materials for Sustainable Applications"**, M. Ahmann, M. Kringstad, M. Platt, A. Miles, S. Gupta, S. Gupta, 42nd International Conference & Exposition on Advanced Ceramics & Composites, JANUARY 21-26, 2018, Daytona Beach, Florida, USA.
3. **"Developing novel online strategies for enhancing materials education by incorporating sustainable practices in engineering design"**, 7th North American Materials Education Symposium, U C Berkeley, March 17-18, 2016.
4. **"Novel Particulate Reinforced Multifunctional Composites"**, M. Bahmer, R. Georgeson, D. Ferguson, S. Gupta, 40th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Jan 24-29 (2016).
5. **"Smart Practices for Enhancing Materials Education"**, 6th North American Materials Education Symposium, Ohio State University, March 26-27, 2015.
6. **"Novel Structural Ceramics by Microstructure Design"**, R. Lofthus, M. Fuka, A. Nur, D. Hennessey, S. Gupta, 11th International Conference on Ceramic Materials and Components for Energy and Environmental Applications, Vancouver, June 14-19, 2015.
7. **"Novel Multifunctional Composites for Energy Harvesting Applications"**, S. Swanson, T. Colling, K. Lindblad, A. Eastman, S. Banerjee, M. N. Cavalli, S. Gupta, 11th International Conference on Ceramic Materials and Components for Energy and Environmental Applications, Vancouver, June 14-19, 2015.
8. **"A Case Study on the Formation of Tribofilms during Dry Sliding of MAX Phases"**, Gordon Research Conference, Bentley Univeristy, Waltham, MA, July 20-25, 2014.
9. **"Novel Senior Design Projects for Developing Better Understanding of Sustainable Materials Manufacturing"**, S. Gupta, D. Bose, and M.N. Cavalli, 5th North American Materials Education Symposium, University of Illinois at Urbana-Champaign, March 20-21, 2014.
10. **"On the Development of Next Generation Advanced Green Manufacturing Technologies"**, E. Chejade, R. Dumm, J. Chmielewski, M. Bugliosi, ND EPSCoR/IDeA 2014 State Conference - Innovations & Expressions - April 29th, 2014.
11. **"Mathematical Models for Understanding Manufacturing of Advanced Materials"**, R. Johnson, J. Resig, J. Carroll, S. Akkoc, and A. Ali (2013-14), ND EPSCoR/IDeA 2014 State Conference - Innovations & Expressions - April 29th, 2014.

12. **“Novel Low Alkali Activated Fly Ash Cement (LAFAC) based Composites”**, M. F. Riyad, T. Hammann, R. Johnson, and S. Gupta , 4th Advances in Cement-based Materials, Urbana, IL, July 8, 2013.
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