GURPREET SINGH, Ph.D.

Harold O. and Jane C. Massey Neff Associate Professor in Mechanical Engineering
Mechanical and Nuclear Engineering Department, Kansas State University, Manhattan, Kansas
Web: (Laboratory): http://www-personal.ksu.edu/~gurpreet
(PIRE): http://nsf-pire-pdc.com/Home.html

HONORS and AWARDS

- NSF PIRE (2018-2023)
- NSF CAREER (2015-2020)
- NSF EPSCoR First Award (2011-2012)
- Invited Speaker at NSF CAREER workshop 2015 and 2018
- Associate Editor of Nanomaterials and Energy Journal (2011-2012)
- Chairman, Editorial Board, American Ceramic Society Bulletin (2017-2018)
- Elected full member of Sigma Xi, the Scientific Research Society 2009
- Big-XII Universities Faculty Fellowship (2010-2011)
- Kansas State University Research Proposal Teamwork Award 2015
- NSF-Summer Institute Energy Manufacturing Fellowship 2011
- **Chairman the Editorial Board (Oct. 2017-Oct. 2018):** The American Ceramic Society Bulletin
- **Member of the Editorial Board (Oct. 2015-Oct. 2018):** The American Ceramic Society Bulletin
- **Member of the Editorial Board (2013-present):** Nature-Scientific Reports Journal (Impact Factor: 5.078)
- **Member of the Editorial Board (Sept. 2015-):** Nanomaterials and Nanotechnology Journal (IF: 1.129)
- **Associate Editor (2011-2012):** 'Nanomaterials and Energy' Journal (Institution of Civil Engineers, UK)
- **Founding Chair of Polymer Derived Ceramics Technical Interest Group at the American Ceramic Society**

REVIEWER/PANELIST

- NSF-DMR (2018), NSF-DMR-CAREER (2017), NSF-CMMI-MEP (2016), NSF-Chemistry-CAREER (2016), NSF-DMR-CAREER (2016), NSF-CMMI-Nanomanufacturing (2014, 2015 & 2016), NSF-DMR-Ceramics (Jan 2014, April 2015, December 2015, February 2016, August 2018), NSF-CBET (March 2014), NSF-CMMI-Materials Processing and Manufacturing Program (May 2012), NSF-CMMI-Mechanics of Materials Program (April 2011), NSF-CMMI-Materials Processing and Manufacturing Program (May 2011)
- German Academic Exchange Service (DAAD) EU/COFUND-Programme P.R.I.M.E. (2017)
- DFG, German Research Foundation (2017)
- Ontario Research Fund, Ministry of Research and Innovation (2016)
- National Science Centre, Poland (2017)
- Ministry of National Education and Scientific Research, Romania (2016)
- New York University-Abu Dhabi, UAE (2015)
- American Chemical Society-Petroleum Research Fund (2015)
- Canada Foundation for Innovation (August 2014)
- United States-Department of Energy-SBIR (2010)

JOURNAL REFEREE

Total manuscripts reviewed 300+, evidence available upon request

Reviewer for: (1) Nature Nanotechnology, (2) Nature Communications, (3) ACS Nano, (4) Chemistry of Materials, (5) Advanced Energy Materials, (6) Advanced Functional Materials, (7) Small, (8) Nanoscale, (9) Journal of Physical Chemistry-C (JPC), (10) Journal of Physical Chemistry Letters (JPCL), (11) ACS-Applied Materials and Interfaces, (12) Langmuir, (13) Journal of Materials Chemistry A, (14) Journal of Materials Chemistry C, (15) Nature-Scientific Reports, (16) Applied Physics Letters, (17) IEEE Transactions on Nanotechnology, (18) Polymer Journal, (19) IEEE Sensors Journal, (20) International Journal of Smart and Nano Materials, (21) Electrochemistry Communications, (22) Acta Biomaterialia, (23) Acta Materialia, (24) Experimental Mechanics, (25) Nanoscale Research Letters, (26) Journal of the American Ceramic Society, (27) Ceramics International, (28) Electrochimica Acta, (29) The Korean

Journal of Chemical Engineering, (30) Journal of Microscopy, (31) Journal of Micromechanics and Microengineering, (32) Materials Research Express, (33) Metrologia, (34) Engineering Science and Technology: an International Journal, (35) Chemical Communications, (36) Journal of the Asian Ceramic Societies, (37) Physical Chemistry Chemical Physics, (38) Progress in Organic Coatings, (39) Composites Science and Technology, (40) Advanced Science, (41) Nanomaterials, (42) Journal of Carbon Research, (43) Surface and Coatings Technology, (44) Angewandt Chemie International Edition, (45) Applied Spectroscopy, (46) Applied Sciences, (47) Chemical Engineering Journal, (48) Materials (journal), (49) Journal of Physics D: Applied Physics, (50) Polymers Open Access journal, (51) Materials Letters, (52) Energy Technology, (53) Crystals, (54) Journal of Alloys and Compounds, (55) Science Advances, (56) Diamond and Related Materials, (57) Advanced Materials Technologies, (58) Materials Chemistry and Physics, (59) Journal of Solid State Electrochemistry, (60) Chemical Science, (61) International Journal of Hydrogen Energy, (62) Molecules-Open Access Journal, and (63) Zeitschrift fuer Metallkunde, (64) Chinese Journal of Chemistry, (65) ChemElectroChem, (66) Chemical Physics Letters, (67) Materials and Design (Elsevier), (68) Chemistry of Flat Materials (Elsevier), (69) Sustainable Energy & Fuels, (70) Journal of Colloid and Interface Science (Elsevier), (71) ACS Sustainable Chemistry & Engineering, (72) ACS Energy Letters, (73) Applied Surface Science, (74) Nano Energy, (75) Journal of the European Ceramic Society, (76) Materials Research Bulletin, (77) Nano letters, (78) Advanced Materials, (79) Advanced Materials Interfaces, (80) Solid State Ionics, (81) Joule (Cell Press—the publisher of the flagship life science journal *Cell*), (82) Advanced Sustainable Systems (Wiley), (83) European Journal of Inorganic chemistry (Wiley), (84) ChemSusChem (Wiley), (85) ACS Applied Nano Materials, (86) Nano-Micro Letters, (87) ACS-Photonics, (88) Journal of Visualized Experiments, (89) Journal of Thermophysics and Heat Transfer, (90) Applied Energy (Elsevier), (91) New Journal of Chemistry (RSC journal), (92) Journal of Physics and Chemistry of Solids (Elsevier), and (93) Batteries & Supercaps (Wiley journal).

PUBLICATIONS

Google scholar https://scholar.google.com/citations?user=tnUO0zoAAAAJ&hl=en&oi=ao

Journal Title	# of articles	Impact Factor
Nano Letters	1	12.08
ACS Nano	1	13.709
J. Physics D: Applied Physics	1	2.373
RSC Advances	3	2.936
Nature Communications	1	12.353
J. Physical Chemistry C	3	4.484
Nanotechnology	2	3.404
J. Physical Chemistry Letters	1	8.709
ACS Applied Materials & Interfaces	5	8.097
Scientific Reports	2	4.122
Journal of Biomedical Optics	1	2.859
J. Materials Chemistry A	1	9.931
Nano-Micro Letters	1	7.381
Materials Letters	1	2.687
Ferroelectric Letters Section	1	0.531
Journal of Materials Science	1	2.993
J. American Ceramic Society	1	2.841
ActaMaterialia	1	6.036
Nanomaterials and Energy Journal	2	new journal
ACS Applied Energy Materials	1	new journal
Applied Physics Express	2	2.667
Applied Physics Letters	2	3.495
Sensors and Actuators A: Physical	1	2.538

*(*represents corresponding author and student contribution is marked in red)*

1. S. Mukherjee, D. Arreola, M. Abass, Z. Ren, and G. Singh*. Assessing Corrosion Resistance of 2D Nanomaterial-based Coatings on Stainless Steel Substrates. **Materials journal** (2018). **Under review.**
2. L. David, S. Mukherjee, M. Abass, and G. Singh*. Exfoliated Transition Metal Dichalcogenide Nanosheets for Sodium Ion Batteries and Supercapacitors. **RSC advances** (2018). **Inpreparation/Under review.**

3. R. Cuccato, S. Mukherjee, Z. Ren, G. Franchin, P. Colombo, G. Singh. Electrospun SiOC Fiber Mats as Freestanding Electrodes for Supercapacitor Applications. **RSC advances** (2018). **Under review.**
4. S. Mukherjee, Z. Ren, and G. Singh*. Beyond Graphene Anode Materials for Emerging Metal Ion Batteries and Supercapacitors. **Nano-Micro Letters, accepted** (2018).
5. S. Mukherjee, and G. Singh*. Two-Dimensional Anode Materials for Emerging Metal-Ion Batteries. **ACS Applied Energy Materials**, **accepted** (2018).
6. S. Mukherjee, Z. Ren, and G. Singh*. Molecular polymer-derived ceramics for applications in electrochemical energy storage devices. **Journal of Physics D: Applied Physics, accepted**: https://doi.org/10.1088/1361-6463/aadb18 (2018).
7. M. A. Abass, A. A. Syed, C. Gervais, and G. Singh*. Synthesis and Electrochemical Performance of Polymer-derived Silicon Oxycarbide/Boron Nitride Nanotube Composite. **RSC Advances**, 7, 21576-21584 (2017).
8. L. David, R. Bhandavat, U. Barrera, and G. Singh*. Silicon Oxycarbide Glass-Graphene Composite Paper Electrode for Long-Cycle Lithium-ion Batteries. **Nature Communications**, 7, Article number: 10998 doi:10.1038/ncomms10998 (2016).
9. M. S. Kolathodi, L. David (equal contribution), M. A. Abass, and G. Singh*. Polysiloxane-Functionalized Graphene Oxide Paper: Pyrolysis and Performance as a Li-Ion Battery and Supercapacitor Electrode. **RSC Advances** 6, 74323 (2016).
10. M. S. Kolathodi, S. N. H. Rao, T. S. Natarajana, and G. Singh. Beaded Manganese Oxide (Mn_2O_3) Nanofibers: Preparation and Application for Capacitive Energy Storage. **Journal of Materials Chemistry A,** DOI: 10.1039/c6ta01948j (2016).
11. L. David, M. S. Kolathodi, M. A. Abass, and G. Singh*. Three-dimensional Polymer-derived Ceramic/Graphene Paper as a Li-ion Battery and Supercapacitor Electrode. **RSC Advances**, Issue 59 (2016).
12. L. David, R. Bhandavat, U. Barrera, and G. Singh*. Polymer-Derived Ceramic Functionalized MoS_2 Composite Paper as a Stable Lithium-ion Battery Electrode. **Scientific Reports (Nature Publishing Group)** Article number: 9792 doi:10.1038/srep09792 (2015).
13. L. David, S. Bernard, C. Gervais, P. Miele, and G. Singh*. Facile Synthesis and High Rate Capability of Silicon Carbonitride/Boron Nitride Composite with a Sheet-Like Morphology. **Journal of Physical Chemistry-C**, DOI: 10.1021/jp508075x (2015).
14. L. David, and G. Singh*. Reduced Graphene Oxide Paper Electrode: Opposing Effect of Thermal Annealing on Li and Na Cyclability. **Journal of Physical Chemistry-C**, 118 (49), pp 28401–28408 (2014).
15. L. David, R. Bhandavat, and G. Singh*. Large Area MoS_2/graphene Composite Paper Based Electrode for Room Temperature Na-ion Batteries: Electrochemical and Mechanical Characterization. **ACS Nano**, 8 (2), pp 1759–1770 (2014).
16. L. David, A. Feldman, E. Mansfield, J. Lehman, and G. Singh*. Evaluating Thermal Damage Resistance of Graphene/Carbon Nanotube Hybrid Composite Coatings. **Scientific Reports (Nature Publishing Group)** 4, Article number: 4311 (2014).
17. L. David, D. Asok, and G. Singh*. Synthesis and Extreme Rate Capability of Si–Al–C–N Functionalized Carbon Nanotube Spray-on Coatings as Li-Ion Battery Electrode. **ACS-Applied Materials & Interfaces,** DOI: 10.1021/am5052729 (2014).
18. L. David, R. Bhandavat, G. Kulkarni, S. Pahwa, Z. Zhong and G. Singh*. Synthesis of Graphene Films by Rapid Heating and Quenching at Ambient Pressures and their Electrochemical Characterization. **ACS- Applied Materials & Interfaces** 5 (3), 546–552 (2013). *Highlighted in R&D magazine, ChemViews, and IEEE Spectrum magazine.*
19. R. Bhandavat and G. Singh*. Stable and Efficient Li-Ion Battery Anodes Prepared from Polymer-Derived Silicon Oxycarbide–Carbon Nanotube Shell/Core Composites. **The Journal of Physical Chemistry C**, 117 (23), 11899–11905 (2013).
20. R. Bhandavat, A. Feldman, C. Cromer, J. Lehman and G. Singh*. Very High Laser-Damage Threshold of Polymer-Derived Si(B)CN- Carbon Nanotube Composite Coatings. **ACS- Applied Materials & Interfaces** 5 (7), 2354–2359 (2013). *Highlighted in NIST Technical Beat, Ceramic Tech Today, and Laser World Focus.*
21. R. Bhandavat, and G. Singh*. Improved Electrochemical Capacity of Precursor-Derived Si(B)CN-Carbon Nanotube Composite as Li-Ion Battery Anode. **ACS- Applied Materials & Interfaces** 4 (10), 5092–5097 (2012).

22. R. Bhandavat, L. David and G. Singh*. Synthesis of Surface Functionalized WS_2 Nanosheets and Performance as Li-Ion Battery Anode. **Journal of Physical Chemistry Letters** 3 (11), 1523–1530 (2012). *Highlighted in Science Daily, PhysOrg, Azo-Nano, ChemViews, and IEEE Spectrum magazine.*
23. R. Bhandavat and G. Singh*. Synthesis, Characterization and High Temperature Stability of Si(B)CN Coated Carbon Nanotubes Using a Boron-Modified Poly(Ureamethylvinyl)Silazane Chemistry. **Journal of the American Ceramic Society** 95 (5), 1536–1543 (2012).
24. R. Bhandavat, W. Kuhn, E. Mansfield, J.H. Lehman and G. Singh*. Synthesis of Polymer-Derived Ceramic Si(B)CN-Carbon Nanotube Composite by Microwave Induced Interfacial Polarization. **ACS Applied Materials & Interfaces** 4 (1), 11–16 (2012). *Highlighted on NSF-site, Local newspapers, and Science Daily.*
25. G. Singh*, A. Slifka, P. Rice, D. Lauria and R. L. Mahajan. Optical Trapping in Air of an Individual Nanotube-Sphere Device. **Applied Physics Express** 5 (9) Art: 095001 (2012).
26. R. Bhandavat, M. Cologna and G. Singh*. Polymer-derived Ceramic SiOC–CNT Paper for use in Lithium-Ion Batteries. **Nanomaterials and Energy Journal** 1(1) 57-61, (2012).
27. R. Bhandavat*, Z.J. Pei, and G. Singh. Polymer-derived Ceramics as Anode Material for Rechargeable Li-Ion Batteries: A Review. **Nanomaterials and Energy Journal** 1(6), 324 –337 (2012).
28. A.J. Slifka, G. Singh*, D.S. Lauria, P. Rice, and R.L. Mahajan. Observations of Nanobubble Formation on Carbon Nanotubes. **Applied Physics Express** 3 (6) Art: 065103 (2010). *Also selected for the Virtual Journal of Nanoscale Science & Technology.*
29. J.H. Lehman*, K.E. Hurst, G. Singh, E. Mansfield, J.D. Perkins, and C.L. Cromer. Core–Shell Composite of SiCN and Multiwalled Carbon Nanotubes from Toluene Dispersion. **Journal of Materials Science** 45, 4251–4254 (2010).

Prior to K-State (August 2009- Present):

30. J. Zhang, J. Ge, M. Shultz, E. Chung, G. Singh, C. Shu, P. Fatouros, S. Henderson, F. Corwin, D. Geohegan, A. Puretzky, C. Rouleau, K. More, C. Rylander, M. Rylander, H. Gibson and H. Dorn*. In Vitro and In Vivo Studies of Single-Walled Carbon Nanohorns with Encapsulated Metallofullerenes and Exohedrally Functionalized Quantum Dots. **Nano Letters** 10 (8), 2843–2848 (2010).
31. V. Bedekar, G. Singh*, R.L. Mahajan, and S. Priya. Synthesis and Microstructural Characterization of Barium Titanate Nanoparticles Decorated SiCN-MWCNT Nanotubes – "nanoNecklace". **Ferroelectrics Letters Section,** 36(5-6), 133-140 (2009).
32. G. Singh*, S. Priya, M. Hossu, S.R. Shah, S. Grover, Ali R Koymen, and R.L. Mahajan. Synthesis, Electrical and Magnetic Characterization of Core-Shell Carbon Nanotube – SiCN nanowires. **Materials Letters**, 63(28), 2435-2438 (2009).
33. G. Singh*, P. Rice, R.L. Mahajan, and J.R. McIntosh. Fabrication and Characterization of a CNT Based Nano-Knife. **Nanotechnology**, 20, 095701 (2009).
34. M. Karmarkar, G. Singh, S. Shah, R.L. Mahajan, and S. Priya*. Large Piezoresistivity Phenomenon in SiCN – (La,Sr)MnO_3 Composites. **Applied Physics Letters**, 94, 072902 (2009). *Also selected for the Virtual Journal of Nanoscale Science & Technology.*
35. J.J. Brown*, J.W. Suk, G. Singh, A.I. Baca, D.A. Dikin, R.S. Ruoff, and V.M. Bright. Microsystem for Nanofiber Electromechanical Measurements. **Sensors and Actuators A: Physical**, 155(1), 1-7 (2009).
36. T. Dennis*, S. Dyer, A. Dienstfrey, G. Singh, and P. Rice. Analyzing Quantitative Light Scattering Spectra of Phantoms Measured with Optical Coherence Tomography. **Journal of Biomedical Optics**, 13, 024004 (2008). *Also selected for the Virtual Journal of Nanoscale Science & Technology.*
37. G. Singh*, P. Rice, and R. L. Mahajan. Fabrication and Mechanical Characterization of a Force Sensor Based on an Individual Carbon Nanotube. **Nanotechnology** 18, 475501 (2007). *Among most downloaded articles: across all IOP journals only ten percent of articles were accessed over 250 times in the quarter, 2007.*
38. G. Singh*, P. Rice, K. Hurst, J. Lehman, and R.L. Mahajan. Laser-Induced Exfoliation of Amorphous Carbon Layer on an Individual Multiwall Carbon Nanotube. **Applied Physics Letters**, 91, 033101 (2007). *Also selected for the Virtual Journal of Nanoscale Science & Technology and featured in nanotechweb.org.*
39. G. Singh, Y. Yu, F. Ernst, and R. Raj*. Shear Strength and Sliding at a Metal–Ceramic (Aluminum–Spinel) Interface at Ambient and Elevated Temperatures. **Acta Materialia**, 55 (9), 3049-3057 (2007).
40. J. J. Brown*, G. Singh, C. Hierold, R. L. Mahajan, and V. M. Bright. MEMS Tensile Characterization of SiCNO-CNT Composite Nanowires. **In preparation**.
41. Z. Ren, and G. Singh. SiOC fibers derived from TTCS/PAA hybrid polymer. **In preparation**.

42. Z. Ren, and G. Singh. Recent developments in polymer derived ceramics fibers and ceramic matrix composites. **In preparation**.

Other publications:

43. R. Bhandavat, L. David, U. Barrera and G. Singh. Large-Scale Synthesis of MoS_2-Polymer Derived SiCN Composite Nanosheets. **Ceramic Transactions** (2012).
44. V. Bedekar, G. Singh, R.L. Mahajan and S. Priya. Barium Titanate and Cobalt Ferrite Nano-Particles Decorated SiCN/MWCNT Nanotubes: Synthesis and Microstructural Characterization. **Ceramic Transactions** (2010).
45. J.J. Brown, J.W. Suk, G. Singh, D.A. Dikin, R.S. Ruoff, and V.M. Bright. Microsystem For Electromechanical Measurements of Carbon Nanofiber Loading and Failure. **A Solid-State Sensors**, **Actuators and Microsystems** Workshop, Hilton Head Island, SC 29928 (2008).
46. G. Singh, P. Rice, J. R. McIntosh and R. L. Mahajan. Fabrication and Mechanical Characterization of Carbon Nanotube Based Nanoknives. IMECE2006-14659**. IMECE proceedings**, Chicago, Illinois USA (2006).

PATENTS APPLICATIONS/INVENTION DISCLOSURES (three issued)

1. L. David, and G. Singh. Aluminum-Modified Polysilazanes for Polymer-Derived Ceramic Nanocomposites; U.S. Patent No. 9,908,905, **issued** March 6, 2018.
2. Bhandavat, R.; Singh, G., Boron-Modified Silazanes for Synthesis of SiBNC Ceramics; United States Patent No. 9,453,111, **issued** on September 27, 2016.
3. L. David, and G. Singh. "SILICON-BASED POLYMER-DERIVED CERAMIC COMPOSITES COMPRISING H-BN NANOSHEETS" U.S. Patent No. 10,093,584 **issued** on October 9, 2018
4. G. Singh. U.S. Provisional Patent Application No. 62/219,545-Transitional Metal Dichalcogenides Functionalized with Polymer-Derived Ceramic And Uses Thereof; Filed September 16, 2015; Docket No. 47555-PRO.
5. L. David, and G. Singh. U. S. Provisional Patent Application 61/862,289 - Robust MoS_2/graphene Composite for Na^+ Battery Application; PCT Filed August 5, 2014; Docket No. 45573-PCT
6. L. David, R. Bhandavat and G. Singh. U.S. Provisional Patent Application 61/817,626 - Flexible Silicon oxycarbide Graphene Composite Electrodes for High Rate Performance Lithium-ion Batteries; Filed April 30, 2013; Docket No. 45192-PRO2
7. G. Singh and R.L. Mahajan. Virginia Tech Intellectual Property; Spray Coatings of Polymer Derived SiCN Particles, April 2009. (Invention disclosure).

BOOKS

1. *Processing, Properties, and Design of Advanced Ceramics and Composites: Ceramic Transactions,* Volume 259, John Wiley & Sons, ISBN: 978-1-119-32364-8
2. *Processing and Properties of Advanced Ceramics and Composites VII: Ceramic Transactions*, Volume 252, John Wiley & Sons, ISBN: 978-1-119-18387-7
3. *Processing and Properties of Advanced Ceramics and Composites VI: Ceramic Transactions*, Volume 249, John Wiley & Sons, ISBN: 978-1-118-99549-5.
4. *Processing and Properties of Advanced Ceramics and Composites V: Ceramic Transactions*, Volume 240, John Wiley & Sons, ISBN: 978-1-118-74409-3
5. *Advances in Nanomaterials and Nanostructures: Ceramic Transactions*, Volume 229. John Wiley & Sons, ISBN: 978-1-1180-6002-5.

PRESENTATIONS AND INVITED TALKS

From K-State (August 2009- Present):

1. L. David and G. Singh. Polymer-derived Ceramic Nanocomposites for Electrochemical Energy Storage. Symposium P06: Molecular Preparative Approaches to Functional Materials. Materials Science and Engineering (MSE) Congress, Darmstadt, Germany, September 2018. **(Oral-Keynote) (Invited).**
2. G. Singh. "Molecular Precursor-Derived Ceramics for Electrochemical Energy Storage Applications". 2nd Annual Energy Harvesting Society Meeting at Penn State at The Navy Yard, Philadelphia, PA, September 2018. **(Invited) (Oral).**

3. G. Singh. “Polymer Derived Ceramic Layered Composite Electrodes for Electrochemical Energy Storage Devices”. Symposium T1S7: Advanced Batteries and Supercapacitors for Energy Storage Applications. 12th International Conference on Ceramic Materials and Components for Energy and Environmental Applications (CMCEE 2018), Singapore, July 2018. **(Invited) (Oral).**
4. R. Cuccato, G. Franchin, S. Mukherjee, M. Abass, P. Colombo, and G. Singh. “Silicon Oxycarbide Micro and Nanostructured Electrodes for Electrochemical Energy Storage”. Symposium 18 - Polymer-derived ceramics development and applications, International Congress on Ceramics. Foz do Iguaçú, Brazil, June 2018. (Oral)
5. G. Singh. “My Experience with NSF CAREER”. NSF-CAREER workshop 2018, Texas A&M University, College Station, TX, May 2018. **(Invited) (Oral).**
6. L. David, S. Mukherjee*, M. Abass, and G. Singh. “Exfoliated Transition Metal Dichalcogenide (TMD) Nanosheets for Supercapacitor and Sodium Ion Battery (SIB) Applications”. 233rd ECS Meeting, Seattle, WA, May 2018. (Oral)
7. D. Arreola*, M. Abass, S. Mukherjee, and G. Singh. “Electrochemical Corrosion Studies of 2D Materials– coated Stainless Steel”. 233rd ECS Meeting, Seattle, WA, May 2018. (Poster)
8. G. Singh. “Molecular Precursor Derived Ceramics and Hybrids”. 81st Annual session of Indian Ceramic Society and International conference on Expanding Horizons of Technological Applications of Ceramics and Glasses, Pune, India, December 2017. **(Oral-Keynote) (Invited).**
9. G. Singh. “Molecular Polymer-derived Ceramics for Applications in Electrochemical Electrochemical Energy Storage Devices”. ES04: Interfaces in Electrochemical Energy Storage, MRS Fall meeting, Boston, MA, December 2017. **(Invited) (Oral).**
10. J. Turnley, and G. Singh. “Transition Metal Dichalcogenides for Application in Supercapacitors”. ASME International Mechanical Engineering Congress & Exposition, Tampa Bay, CA, November 2017. (Poster)
11. M. Abass, L. David, and G. Singh. “Exfoliation of Transition Metal Dichalcogenides into Nanosheets and Performance as Sodium Ion Battery Electrode”. Materials Science and Technology Conference, Pittsburgh, PA, October 2017. **(Invited) (Oral).**
12. G. Singh. “Molecular Precursor-derived Ceramics for Electrochemical Energy Storage Applications”. SBPMAT, Brazilian Materials Research Society Meeting, Gramado, Brazil, September 2017. **(Invited) (Oral).**
13. G. Singh. “Molecular Precursor Derived Ceramics and Layered Composites for Energy Storage Devices”. Department of Mechanical Engineering, University of Campinas, Sao Paulo State, Brazil, September 2017. **(Invited) (Oral).**
14. G. Singh. “Molecular Precursor Derived Ceramics and Layered Composites for Energy Storage Devices”. Materialwissenschaft, Technische Universität Darmstadt, Germany, July 2017. **(Invited) (Oral).**
15. G. Singh. “Three-dimensional Polymer-Derived Ceramic Composite Paper Electrode for Electrochemical Energy Storage Applications”. 15th Conference & Exhibition of the European Ceramic Society, ECerS2017, July 2017. (Oral).
16. G. Singh. “Molecular Precursor Derived Ceramics and Layered Composites for Energy Storage Devices”. UNESP: Câmpus de Araraquara - Instituto de Química, SP, Brazil June 2017. **(Invited) (Oral).**
17. G. Singh. “Molecular Precursor Derived Ceramics and Layered Composites for Energy Storage Devices”. Chemistry Department at Federal University of Sao Carlos (UFSCar) in Sao Carlos, SP, Brazil, June 2017. **(Invited) (Oral).**
18. G. Singh. “Molecular Precursor Derived Ceramics and 2-D Layered Composites for Energy Storage Applications”. Mechanical Engineering Department, Texas A & M University, May 2017. **(Invited) (Oral).**
19. M. A. Abass, and G. Singh. “Boron-modified Silicon Oxycarbide Composite Electrode for Electrochemical Energy Storage”, Symposium: PACRIM Symposium 04: Polymer-Derived Ceramics (PDCs) and Composites, PACRIM12 Conference, Waikoloa, Hawaii (2017**). (Invited) (Oral).**
20. M. A. Abass, M. S. Kolathodi, and G. Singh. “Boron-modified Silicon Oxycarbide/graphene Composite Paper Electrode for Electrochemical Energy Storage”, Symposium: ES2: High-Capacity Electrode Materials for Rechargeable Energy Storage, MRS Meeting, Phoenix, AZ (2017). (Poster)
21. L. David, M. Abass, and G. Singh. “Spontaneous Exfoliation of Transition Metal Dichalcogenide Crystals and Performance as Electrodes for Rechargeable Batteries and Supercapacitors”, Symposium: ES2: High-Capacity Electrode Materials for Rechargeable Energy Storage, MRS Meeting, Phoenix, AZ (2017). (Poster)
22. J. Petrovick, G. Biby, M. A. Abass, and G. Singh. “Electrochemical Performance of TMD/$KMnO_4$ Hybrids as Supercapacitor Electrode Materials”, # 2637463, Category: ES2: High-Capacity Electrode Materials for Rechargeable Energy Storage, MRS Meeting, Phoenix, AZ (2017). (Poster)

23. M. A. Abass, M. S. Kolathodi, and G. Singh. "Boron-modified Silicon Oxycarbide/graphene Composite Paper Electrode for Electrochemical Energy Storage". International Workshop on Advanced Materials (IWAM-2017), Ras Al Khaimah, UAE (2017). **(Invited) (Poster)**
24. M. A. Abass, L. David, M. S. Kolathodi, and G. Singh. "Silicon Oxycarbide/graphene Composite Paper Electrode for Electrochemical Energy Storage". Symposium: Novel Electrode Materials and Architectures for Energy and Sensing Applications at the 51st ACS-MWRM, Manhattan, KS, October 2016. **(Invited) (Oral)**
25. G. Singh. "Exfoliation and Alkali Metal-ion Cycling Behavior of Transition Metal Chalcogenide Nanosheets". MRS-Brazil Meeting, Campinas, Brazil, September 2016. **(Invited) (Oral)**
26. G. Singh. "Molecular Precursor Derived Ceramics and their Interfacing with 1-D and 2-D Materials for Extreme Engineering Applications". University of North Carolina Nanotechnology Seminar Series, August 2016. **(Invited) (Oral)**
27. L. David, M. Abass, and G. Singh. "Exfoliation and sodium cycling behavior of transition metal dichalcogenide nanosheets". 252nd American Chemical Society National Meeting, Philadelphia, PA, August 2016. **(Invited) (Oral)**
28. G. Singh. "Precursor-Derived Ceramic Nanowire and Nanosheet Composites for High Power Laser Radiometry". 9th International Conference on High Temperature Ceramic Matrix Composites (HTCMC-9), Toronto, Canada, June 2016. (Oral)
29. Harrison Gunn, Victoria Voigt, K. M. Shareef, and G. Singh. "Modified Graphene Oxide for Long Cycle Sodium-Ion Batteries". MRS Meeting, Pheonix, AZ, March/April 2016. (Poster)
30. K. M. Shareef, M. Palei, Victoria Voigt, T. S. Natarajan, and G. Singh. "Synthesis of Novel Birnessite Type MnO_2 Nanochains by Electrospinning and Their Application as Supercapacitor Electrodes". MRS Meeting, Pheonix, AZ, March/April 2016. (Poster)
31. K. M. Shareef, Harrison Gunn, Victoria Voigt, and G. Singh. "Modified Graphene Oxide for Long Cycle Sodium-Ion Batteries". APS March Meeting, Baltimore, MD. March 2016. (Poster)
32. K. M. Shareef, M. Palei, T. S. Natarajan, and G. Singh. "MnO_2 Encapsulated Electrospun TiO_2 Nanofibers: A Strategic Approach towards the Development of Aqueous Electrolyte Based Asymmetric Supercapacitors". APS March Meeting, Baltimore, MD. March 2016. (Oral)
33. K. M. Shareef, M. Palei, T. S. Natarajan, and G. Singh. "A Strategic Approach for the Synthesis of MnO_2 Nanochains by Electrospinning towards Energy Storage Applications". International Workshop on Advanced Materials (IWAM 2016), Ras Al Khaimah, UAE. February 2016. **(Invited) (Poster).**
34. G. Singh. Polymer to Ceramic Transformation of Polysilazane Wrapped Nanotubes and their Applications in Energy-Based Devices. TMS, 145th Annual Meeting & Exhibition, Nashville, TN, February 2016. **(Invited) (Oral).**
35. G. Singh. Chemically Modified Graphene/PDC Electrodes for Long-Cycle Lithium-Ion Batteries. 40th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, FL, January 2016. **(Invited) (Oral).**
36. G. Singh. Chemically Modified Graphene-based Composite Paper Electrodes for Long- Cycle Metal-ion Batteries. Composites at Lake Louise conference, Alberta, Canada, November 2015 **(Oral) (Invited).**
37. G. Singh. Flexible Nanostructured Polymer-Derived Ceramic Composite Electrodes for Long-Cycle Li-Ion Batteries. 11th Pacific Rim Conference of the Ceramic Societies, South Korea, September 2015. **(Invited) (Oral).**
38. G. Singh. "Precursor-Derived Ceramic Nanocoatings for Laser Radiometry". NIST Nanotube Bolometer Workshop, Boulder, CO, July 2015. **(Invited) (Oral).**
39. L. David, and G. Singh. "Precursor-Derived SiCN/Hexagonal Boron Nitride Nanosheet Composite: Fabrication and Electrochemical Characterization". 11th International Conference on Ceramic Materials and Components for Energy and Environmental Applications, Vancouver, BC, Canada, June 2015 (Oral).
40. G. Singh. "NSF CAREER Proposal: My Experience and Advice". NSF-CMMI CAREER workshop 2015, Northeastern University, Boston, MA, April 2015. **(Invited) (Oral).**
41. L. David, and G. Singh. "Opposing Effect of Thermal Annealing on Sodiation and Lithiation of Thermally Annealed Reduced Graphene Oxide Electrodes". Program: Symposium I-High Capacity Anode Materials for Lithium Ion Batteries, I5: Carbon Based Materials, MRS Meeting, San Francisco, CA, April 2015 (Oral).
42. L. David, and G. Singh. "Synthesis and High Rate Capability of Silicon Carbonitride (SiCN) Functionalized Boron Nitride (h-BN) Nanosheets". Program: Symposium I-High Capacity Anode Materials for Lithium Ion Batteries. I6: Poster Session: Emerging New Materials, MRS Meeting, San Francisco, CA, April 2015 (Poster).
43. L. David, and G. Singh. "Self-Standing Paper Based Electrodes Prepared from Molecular Precursor Derived SiOC-CNT/G Composite". Program: Symposium H-Mechanics of Energy Storage and Conversion-Batteries,

Thermoelectrics and Fuel Cells MRS-Spring Meeting 2015 (Poster). MRS Meeting, San Francisco, CA, April 2015 (Poster).

44. L. David, and G. Singh. "Boron Doped Silicon Carbonitride/Graphene Hybrid Electrode for Advanced Li-Ion Battery Applications". Program: Symposium I-High Capacity Anode Materials for Lithium Ion Batteries, I6: Poster Session: Emerging New Materials, MRS Meeting, San Francisco, CA, April 2015 (Poster).
45. L. David, and G. Singh. "Siliconoxycarbide Encapsulated Graphene Free-Standing Papers as Li-ion Battery Anode". Program: Symposium H-Mechanics of Energy Storage and Conversion–Batteries, Thermoelectrics and Fuel Cells MRS-Spring Meeting 2015 (Poster). MRS Meeting, San Francisco, CA, April 2015 (Poster).
46. G. Singh. Chemically Modified Graphenes (CMG): A Flexible Approach to the Design of Metal-Ion Battery Electrodes. Materials Challenges in Alternative & Renewable Energy, South Korea, February 2015. **(Invited) (Oral).**
47. G. Singh. Graphene-Based Electrodes for Long-Cycle Metal-Ion Rechargeable Batteries. Physics Condensed Matter Seminar Series, Kansas State University, February 2015. **(Invited) (Oral).**
48. L. David, and G. Singh. "MoS_2 Paper Electrodes for Na-Ion Battery Applications: Electrochemical and Mechanical Characterization". Z2.05. Program—Symposium Z: Materials Challenges for Energy Storage Across Multiple Scales, MRS Meeting, Boston, MA, December 2014. (Oral)
49. L. David, D. Asok, S. Pahwa, and G. Singh. "Extreme Rate Capability of Hybrid Al-Modified Si-C-N Carbon Nanotube Spray Coatings as Li-Ion Battery Electrodes". Y8.02. Program—Symposium Y: Technologies for Grid-Scale Energy Storage, MRS Meeting, Boston, MA, December 2014. (Oral)
50. L. David, S. Pahwa, E. Mansfield, A. Feldman, J. Lehman, and G. Singh. "Nanostructured Thermal Absorber Coatings of Graphene-Carbon Nanotube Hybrid Composite for High-Power Laser Radiometry". L16.05. Program—Symposium L: Optical Metamaterials and Novel Optical Phenomena Based on Nanofabricated Structures, MRS Meeting, Boston, MA, December 2014. (Oral)
51. L. David, S. Pahwa, and G. Singh. "Flexible Three Dimensional Paper Electrodes of Molecular Precursor Derived Si-B-C-N/Graphene Composite For Advanced Li-Ion Battery Applications". Z9.24. Program—Symposium Z: Materials Challenges for Energy Storage Across Multiple Scales, MRS Meeting, Boston, MA, December 2014. (Poster)
52. L. David, D. Asok, U. Barrera, E. Black, and G. Singh. "High Rate Capability of Si-Al-C-N Functionalized Carbon Nanotubes as Li-ion Battery Electrodes". Materials Science and Technology Conference, Pittsburgh, PA, October 2014. (Oral)
53. L. David, and G. Singh. "Large Area MoS_2/rGO Paper Electrodes for Room Temperature Na-Ion Batteries". Materials Science and Technology Conference, Pittsburgh, PA, October 2014. (Oral)
54. L. David, and G. Singh. "Reduced Graphene Oxide Paper Electrodes For Lithium-ion and Sodium-ion Batteries Applications". Materials Science and Technology Conference, Pittsburgh, PA, October 2014. (Oral)
55. L. David, S. Pahwa, and G. Singh. "Lithiation/Delithiation Behavior of Graphene Films Prepared by Atmospheric Pressure Chemical Vapor". Materials Science and Technology Conference, Pittsburgh, PA, October 2014. (Poster)
56. L. David, A. Feldman, E. Mansfield, J. Lehman, S. Pahwa, and G. Singh. "High Laser Thermal Damage Resistance of Chemically Modified Graphene/Carbon Nanotube Hybrid Spray Coatings". Materials Science and Technology Conference, Pittsburgh, PA, October 2014. (Poster)
57. L. David, R. Bhandavat, U. Barrera, S. Pahwa, and G. Singh. "Polymer-derived Ceramic Functionalized Molybdenum disulfide as a Stable Lithium-ion Battery Electrode". Materials Science and Technology Conference, Pittsburgh, PA, October 2014. (Poster)
58. L. David, R. Bhandavat, U. Barrera, S. Pahwa, and G. Singh. "Synthesis of SiOC Intercalated Graphene Paper and Electrochemical Performance as LIB Electrode". Materials Science and Technology Conference, Pittsburgh, PA, October 2014. (Poster)
59. G. Singh. "Boron Containing PDC Coatings." Review of the NHSC Program and Future of High Temperature Structural Ceramics, University of Colorado at Boulder, Boulder, CO, July 2014. **(Invited) (Oral).**
60. L. David, and G. Singh. "MoS_2/graphene Composite Paper Electrodes for Na-ion Battery Applications." J25.00008. Session J25: Focus Session: Materials for Electrochemical Energy Storage: Capacitors. APS Meeting, Denver, CO, March 2014. (Oral)
61. L. David, R. Bhandavat, U. Barrera and G. Singh. "Performance of Silicon Carbonitride Functionalized MoS_2 Nanosheets as Lithium-ion Battery Anode." C1.00026. APS Meeting, Denver, CO, March 2014. (Poster)

62. L. David, D. Asok, and G. Singh. "Al-Modified SiCN Carbon Nanotube Coatings as Lithium ion Battery Electrode." H1.00086. APS Meeting, Denver, CO, March 2014. (Poster)
63. L. David, and G. Singh. "SiBCN-CNT/Graphene Paper Electrode." H1.00096. APS Meeting, Denver, CO, March 2014. (Poster)
64. L. David, A. Feldman, E. Mansfield, J. Lehman, and G. Singh. "Evaluating the Thermal Damage Resistance of Reduced Graphene Oxide/Carbon Nanotube Hybrid Coatings." H1.00223. APS Meeting, Denver, CO, March 2014. (Poster)
65. G. Singh. "Robust Li-ion Battery Anodes Prepared from Nanostructured Polymer-Derived Ceramics." ICACC-S7-035-2014, S7-08. Nanomaterials for Energy IV: Batteries II, 38th International Conference and Expo on Advanced Ceramics and Composites, Daytona Beach, FL, January 2014. **(Invited) (Oral).**
66. L. David, and G. Singh. "Electrochemical Performance of Large Area Graphene Films Prepared by Rapid Heating and Quenching at Ambient Pressures." ICACC-S6-013-2014, LIONBAT3. Li-ion Battery Technology - Diagnostics and Characterization, 38th International Conference and Expo on Advanced Ceramics and Composites, Daytona Beach, FL, January 2014. (Oral)
67. L. David, and G. Singh. "Stable Electrochemical Performance of Graphene/SiBCN Layered Composite Electrode for Lithium Ion Battery Applications." ICACC-S6-017-2014, LIONBAT4. Li-ion Battery Technology - Characterization and Design, 38th International Conference and Expo on Advanced Ceramics and Composites, Daytona Beach, FL, January 2014. (Oral)
68. L. David, and G. Singh. "Free-Standing Polymer Derived SiCN/ MoS_2 Composite Paper Anode for Li-Ion Battery." ICACC-S6-P066-2014, 38th International Conference and Expo on Advanced Ceramics and Composites, Daytona Beach, FL, January 2014. (Poster)
69. L. David, and G. Singh. "Polymer-derived Siliconoxycarbide Intercalated Graphene Composite Papers for Li-ion Battery Anode." ICACC-S6-P065-2014, 38th International Conference and Expo on Advanced Ceramics and Composites, Daytona Beach, FL, January 2014. (Poster)
70. L. David, and G. Singh. "Few Layer SiCN/MoS_2 Composite Paper Anode for Fast and Reversible Li+ Storage." CC9.27. Program - Symposium CC: Advanced Materials for Rechargeable Batteries, MRS Meeting, Boston, MA, December 2013. (Poster)
71. L. David, and G. Singh. "Pyrolysis and Electrochemical Lithiation Behavior of Graphene Oxide-Polysiloxane Nano-Composite Paper Prepared via Vacuum-Assisted Self-Assembly". CC6.27. Program - Symposium CC: Advanced Materials for Rechargeable Batteries, MRS Meeting, Boston, MA, December 2013. (Poster)
72. L. David, and G. Singh. "Synthesis and Electrochemical Lithiation Behavior of Graphene Films on Ni And Cu Substrates." RR15.137. Program - Symposium RR: Large-Area Graphene and Other 2D-Layered Materials–Synthesis, Properties and Applications, MRS Meeting, Boston, MA, December 2013. (Poster)
73. E. Black, R. Bhandavat, A. Feldman, L. David, C. Cromer, J. Lehman, and G. Singh. "High Optical Absorbance and Laser Damage Resistance of Si(B)CN/Carbon Nanotube Composite Coatings." Paper Number: IMECE2013-67287, ASME 2013 International Mechanical Engineering Congress & Exposition, San Diego, CA, December 2013. (Poster)
74. G. Singh. "Very High Laser-damage Threshold of Polymer-derived Si(B)CN- Carbon Nanotube Composite Coatings." Nanotechnology for Defense Conference, Tucson, AZ, November 2013. **(Invited) (Oral).**
75. L. David, R. Bhandavat, and G. Singh. "Electrochemical Performance of Acid Functionalized Tungsten Disulfide Nanosheets." Materials Science and Technology Conference, Montreal, Canada, October 2013. (Oral)
76. R. Bhandavat and G. Singh. "Polymer-derived SiOC/Carbon nanotube Shell/Core Composite as a Stable Li-Ion Battery Anode." Symposium: Energy and Functional Applications I. 10th Pacific Rim Conference on Ceramic and Glass Technology, San Diego, CA, June 2013. (Oral)
77. R. Bhandavat, A. Feldman, J. Lehman, C. Cromer, and G. Singh. "Very High Laser-damage Threshold of Polymer-derived Si(B)CN-carbon Nanotube Composite Coatings." Symposium DDD: Extreme Environments—A Route to Novel Materials. MRS Meeting, San Francisco, CA, April 2013. (Oral)
78. L. David and G. Singh. "Rapid Synthesis of Few Layer Graphene Films and Their Electrochemical Behavior as Li-ion Battery Anode." Session C39: Focus Session: Materials for Electrochemical Energy Storage I. APS March Meeting, Baltimore, MD, March 2013. (Oral)
79. L. David and G. Singh. "Vacuum-Assisted Self-Assembly of Polymer Derived Siliconoxycarbide-Graphene Composite as Li-ion Battery Anode." Session H1: Poster Session I. APS March Meeting, Baltimore, MD, March 2013. (Poster)

80. L. David and G. Singh. “Self-standing Paper Based Anodes Prepared From Siliconcarbonitride-MoS_2 Composite For Li-ion Battery Applications.” Session Q1: Poster Session II. APS March Meeting, Baltimore, MD, March 2013. (Poster)
81. R. Bhandavat and G. Singh. **“**Polymer-derived SiCN/MoS_2 Nanosheet Composite for Next generation Lithium Ion Battery Anodes.” MRS Meeting, San Francisco, April 2012. (Oral)
82. R. Bhandavat, M. Cologna, R. Raj and G. Singh. “Synthesis and Electrochemical Performance of SiOC-Carbon Nanotube Composite Nanowires.” MRS Meeting, San Francisco, April 2012. (Poster)
83. R. Bhandavat C. Cromer, J.H. Lehman and G. Singh. “Si(B)CN-Carbon nanotube Composite for High-Power Laser Radiometry.” Session: Optical and Thermal Radiative Properties”. 18th Symposium on Thermophysical Properties, Boulder, CO, June 2012. (Oral)
84. R. Bhandavat and G. Singh. “Polymer-derived Ceramic SiCN-MoS_2 Nanosheet Composite for Lithium Ion Battery Anodes.” APS Meeting, Boston, MA, March 2012. (Poster)
85. R. Bhandavat and G. Singh. “Synthesis and High Temperature Stability of Amorphous Si(B)CN-MWCNT Composite Nanowires.” Session W6: Focus Session: Carbon Nanotube Synthesis, Structure and Defects. APS Meeting, Boston, MA, March 2012. (Oral)
86. R. Bhandavat, M. Cologna, R. Raj and G. Singh. “Synthesis and Electrochemical Performance of SiOC-Carbon Nanotube Composite Coatings.” APS March Meeting, Boston, MA, March 2012. (Poster)
87. L. David, R. Bhandavat, U. Barrera and G. Singh. “Synthesis and Chemical Characterization of SiOC-Graphene Composite Paper.” Materials Science and Technology Conference, Pittsburgh, PA, October 2012. (Oral)
88. R. Bhandavat, J. Lehman, C. Cromer and G. Singh. “Polymer-Derived Si(B)CN-MWCNT Composite Coatings for High Power Laser Radiometry.” Materials Science and Technology Conference, Pittsburgh, PA, October 2012. (Oral)
89. L. David and G. Singh. “Synthesis of Large-Area Few Layer Graphene Films by Rapid Heating and Cooling in a Modified APCVD Furnace.” Materials Science and Technology Conference, Pittsburgh, PA, October 2012. (Oral)
90. R. Bhandavat, L. David, U. Barrera and G. Singh. “MoS_2-SiCN Nanosheet Composite for Lithium Ion Battery Anodes.” Materials Science and Technology Conference, Pittsburgh, PA, October 2012. (Oral)
91. R. Bhandavat, R. Raj, and G. Singh. “Electrochemical Performance of Polymer Derived Si(B)CN-Carbon Nanotube Core Shell Composite Nanowire Coatings.” Materials Science and Technology Conference, Pittsburgh, PA, October 2012. (Oral)
92. R. Bhandavat and G. Singh. “Synthesis, Characterization and High Temperature Stability of Polymer-derived Ceramic Si(B)CN Coated Carbon Nanotubes.” NSF-EPSCoR Conference, Wichita, KS, January 2012. (Poster)
93. R. Bhandavat, L. David, U. Barrera and G. Singh. “Synthesis and Electrochemical Analysis of SiCN-MoS_2 Nanosheet Composite for Lithium Ion Battery Anodes.” 36th International Conference and Expo on Advanced Ceramics and Composites, Daytona Beach, FL, January 2012. (Oral)
94. R. Bhandavat and G. Singh. “Synthesis and Electrochemical Performance of SiOC-Carbon Nanotube Composite Nanowire Coatings.” 36th International Conference and Expo on Advanced Ceramics and Composites, Daytona Beach, FL, January 2012. (Oral)
95. R. Bhandavat, W. Kuhn, E. Mansfield, and G. Singh. “Microwave Assisted Synthesis of Si(B)CN-MWCNT Free-Standing Paper for High Temperature Applications.” 36th International Conference and Expo on Advanced Ceramics and Composites, Daytona Beach, FL, January 2012. (Oral)
96. G. Singh. "Synthesis and Characterization of Polymer-derived Si(B)CN-Carbon Nanotube Nanowires for Applications in Energy Devices." NSF-EPSCoR Kansas Center for Solar Energy Research, Manhattan, KS, September 2011. **(Invited) (Oral).**
97. R. Bhandavat and G. Singh. “Synthesis and Spectroscopic Characterization of Si(B)CN Composite Nanowires.” Materials Science and Technology Conference, Columbus, OH, October 2011. (Oral)
98. L. David, R. Bhandavat, U. Barrera and G. Singh. “Large-Scale Synthesis of MoS_2/ Polymer Derived Ceramic Composite Nanosheets.” Materials Science and Technology Conference, Columbus, OH, October 2011. (Oral)
99. G. Singh. “Synthesis, Characterization and Testing of Polymer-derived Ceramic Composite Nanowires.” 35th International Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, FL, January 2011. **(Invited) (Oral).**
100. R. Bhandavat and G. Singh. “Analysis of Si(B)CN Nanowires.” Electronic Materials and Applications Conference (EMA 2011), Orlando, FL, January 2011. **(Invited) (Oral).**

101. G. Singh, A. Slifka, P. Rice, D. Lauria and R. L. Mahajan. "Fabrication and Optical Manipulation of an Individual Carbon Nanotube-Sphere Mechanical Force Sensor." ASME IMECE Micro/Nano Poster Forum, Denver, CO, 2011. (Poster)
102. G. Singh, R. Bhandavat, K. Hurst, E. Mansfield, J. Perkins, C. Cromer, R. Mahajan and J. Lehman. "Polymer Derived SiCN and SiCN/Multiwalled Carbon Nanotubes for High Power Laser Radiometry." Materials Science and Technology Conference, Houston, TX, October 2010. (Poster)
103. G. Singh. "Nanowire Based Devices for Sensing and Energy Generation". Chemical Engineering Seminar Series, Kansas State University, November 2009. **(Invited) (Oral).**
104. G. Singh. "Fabrication and Testing of Nanoscale Devices." Physics Condensed Matter Seminar Series, Kansas State University, September 2009. **(Invited) (Oral).**

Prior to K-State:

105. V. Bedekar, G. Singh, R. Mahajan and S. Priya. "Barium Titanate Nano-Particles Decorated SiCN/MWCNT Nanotubes: Synthesis and Microstructural Characterization." Materials Science and Technology Conference, Pittsburgh, PA, October 2009. (Oral)
106. G. Singh. **"**Nanotechnology Solutions for Energy Harvesting." 4th Annual Energy Harvesting Workshop, Blacksburg, VA, January 2009. **(Invited) (Oral).**
107. G. Singh. **"**Nanofabrication in the Dual Beam Focused Ion Beam (FIB)." Nanomaterials Characterization Facility, University of Colorado at Boulder, CO, August 2008. **(Invited) (Oral).**
108. G. Singh. **"**Fabrication and Mechanical Characterization of Individual Carbon Nanotube Based Devices." Intel Corp., Hillsboro OR, July 2007. **(Invited) (Oral).**
109. G. Singh, P. Rice, J. R. McIntosh and R. L Mahajan. "Fabrication and Mechanical Characterization of CNT Based Nanoknives." 2nd Annual CU-NIST Research Symposium, Boulder, CO, March 2007. (Poster)
110. G. Singh, Paul Rice, Richard McIntosh and Roop L Mahajan. "Fabrication and Mechanical Characterization of Carbon Nanotube Based Nanoknives." IMECE2006- 14659, ASME International Mechanical Engineering Congress and Exposition, Chicago, IL, 2006. (Oral)
111. G. Singh, R. Raj, Y. Yu and F. Ernst. "The Mechanical Strength Of Al-$MgAl_2O_4$ Interfaces." Graduate Engineering Annual Research Symposium (GEARS), University of Colorado at Boulder, March 2006. (Poster)
112. Y. Yu, J. Mark, F. Ernst, T. Wagner, G. Singh and R. Raj. "Diffusion Reactions at Metal–oxide Interfaces: The Effect of an Applied Electric Field." TMS, 135th Annual Meeting and Exhibition, San Antonio, TX, March 2006. **(Invited) (Oral).**
113. G. Singh, R. Raj, Y. Yu and F. Ernst. "Ion Exchange and Mechanical Characteristics at Metal-oxide Interfaces." Graduate Engineering Annual Research Symposium (GEARS), University of Colorado at Boulder, March 2005. (Poster)
114. G. Singh and K. Gall. "Study of Structural and Mechanical Properties of Si Nanowires using Atomistic Simulations (MEAM Approach)." Graduate Engineering Annual Research Symposium (GEARS), University of Colorado at Boulder, March 2004. (Oral)
115. Y. Yu, J. Mark, F. Ernst, G. Singh and R. Raj. "Ion Exchange at Metal-oxide Interfaces." Microscopy and Microanalysis, ORNL, TN, 2004. (Poster)