

Vikas Berry, PhD

Department Head and Associate Professor, Department of Chemical Engineering,
University of Illinois at Chicago
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EDUCATION

Indian Institute of Technology-Delhi	Chemical Engineering	BS	1999
University of Kansas	Chemical Engineering	MS	2003
Virginia Tech	Chemical Engineering	Ph.D	2006

APPOINTMENTS

Nov/16 -	Department Head, University of Illinois at Chicago, Chicago, IL
Aug/15 - Nov/16	Interim Head, University of Illinois at Chicago, Chicago, IL
Aug/14 -	Associate Professor, University of Illinois at Chicago, Chicago, IL
Nov/11 - Aug/14	William H. Honstead Professor of Chemical Engineering, Kansas State University
Jul/12 - Aug/14	Associate Professor, Kansas State University, Manhattan, KS
Jan/07 - Jun/12	Assistant Professor, Kansas State University, Manhattan, KS
Jan/03 - Dec/06	Graduate Research Assistant (PhD), Virginia Tech, Blacksburg, VA
Aug/00 - Dec/02	Graduate Research Assistant (MS), University of Kansas, Lawrence, KS
Aug/99 - Jul/00	Pharmaceutical Process Scientist, Cadila Pharmaceuticals, India

PROFESSIONAL ACTIVITIES AND HONORS:

- (1) Recipient of **Prof. Rudolph A. Marcus Award - 2017**
- (2) **NSF-CAREER Award – 2011**
- (3) **Endowed Chair: William H. Honstead Professorship (2011-2014)**
- (4) **Sigma Xi Outstanding Junior Scientist Award – 2010**
- (5) **Editorial Board Member for Nature Publication Group's journal: Scientific Reports**
- (6) **Plenary Lecture: Tsinghua University (China 2011)**
- (7) **Keynote Lectures: ISFM – (India 2018); ICREA – Graphene Biosensors (Spain - 2015); IMST (India, 2012)**
- (8) Research highlighted in **Nature, Science News, Washington Post, Royal Society of Chemistry, Wall Street Journal, and Discover.**
- (9) **Associate Editor of Journal of Nanoscience Letters**
- (10) **Editorial Board member of Advanced Carbon**
- (11) **Guest Editor, Journal of Nanomaterials and Molecular Nanotechnology**
- (12) **Advisory Board of All Results Journal-Nano**
- (13) **Big-XII Fellow - 2009, Kansas State University**
- (14) **Faculty Development Award, Kansas State University, 2007, 2008, 2010**
- (15) **Omega Chi Epsilon Honor Society of Chemical Engineering, Member, 2007**
- (16) **Sigma Xi Scientific Research Society, Member, 2007**
- (17) **Empire Who's Who Honoree, 2006**
- (18) **Stroebel Scholarship Recipient, University of Kansas 2000-02**

PUBLICATIONS (CITATIONS = 3570) *Indicates corresponding authorship

1. Shikai Deng, and Vikas Berry*, " *Strain Engineering in Two-Dimensional Nanomaterials Beyond Graphene*", **Nano Today**, **Accepted**, 2018
2. Phong Nguyen, Sanjay Behura, Michael Seacrist and Vikas Berry*, " *Carbon-Radical's Intra-Grain-Diffusion for Wafer-Scale, Direct Growth of Graphene on Silicon-Based Dielectrics*", **ACS Applied Materials and Interfaces**, **Accepted**, 2018
3. Songwei Che, Kabeer Jasuja, Sanjay K. Behura, Phong Nguyen, T. S. Sreeprasad, and Vikas Berry*, " *Retained Carrier-Mobility and Enhanced Plasmonic-Photovoltaics of Graphene via ring-centered η 6 Functionalization and Nano-Interfacing*", **Nano Letters**, **17 (7)**, 4381-4389, 2017
 - o **Featured in ScienceDaily and others**
4. Sanjay Behura, Phong Nguyen, Songwei Che, Rousan Debbarma, Michael Seacrist and Vikas Berry*, " *Chemical Interaction Guided, Metal-Free Growth of Large-Area Hexagonal Boron Nitride on Silicon-Based Substrates*", **ACS Nano**, **11 (5)**, 4985-4994 2017
5. Shikai Deng, Enlai Gao, Zhiping Xu, **Vikas Berry***, " *Adhesion Energy of MoS₂ Thin Films on Silicon-Based Substrates Determined via the Attributes of a Single MoS₂ Wrinkle*", **ACS Applied Materials and Interfaces**, **9 (8)**, 7812-7818, 2017
6. Sanjay Behura, Kai-Chih Chang, Yu Wen, Rousan Debbarma, Phong Nguyen, Songwei Che, Shikai Deng, Michael Seacrist, and Vikas Berry*, " *WS₂/Silicon Heterojunction Solar Cells*", **IEEE Nanotechnology Magazine**, **11 (2)**, 33-38, 2017
7. Vedhikha T. Parthasarathy, Rousan Debbarma, Sanjay Behura, Phong Nguyen, Yu Wen, Dylan Lynch, and Vikas Berry*, " *Facile Solution Processed MoS₂-PEDOT:PSS Mixed Structure as Flexible Paper-Based Infra-Red Sensor*", **Science Advances Today**, **3**, 25268, 2017
8. Bijentimala Keisham, Arron Cole, Phong Nguyen, Ankit Mehta, **Vikas Berry***, " *Cancer Cell Hyperactivity and Membrane Dipolarity Monitoring via Raman Mapping of Interfaced Graphene: Towards Non-Invasive Cancer Diagnostics*", **ACS Applied Materials and Interfaces**, **8 (48)**, 32717, 2016
 - o **Featured in AIChE, New Atlas, The Engineer, ScienceDaily, and others**
9. Shikai Deng, and **Vikas Berry***, " *Increased Hierarchical Wrinklons on Stiff Metal Thin Film on Liquid Meniscus*", **ACS Applied Materials and Interfaces**, **8 (37)**, 24956-24961, 2016
10. Shikai Deng, Enlai Gao, Yanlei Wang, Soumyo Sen, Sreeprasad Theruvakkattil Sreenivasan, Sanjay Behura, Zhiping Xu, Petr Kral, and **Vikas Berry***, " *Confined, Oriented and Electrically Anisotropic Graphene Wrinkles on Bacteria*", **ACS Nano**, **10 (9)**, 8403, 2016
 - o **Featured in The Economist, The Engineer, ScienceDaily, Azo-Nano, Agetime, Physorg, NanoWerk etc**
11. Shikai Deng and **Vikas Berry***, " *Wrinkled, Rippled and Crumpled Graphene: An Overview of Formation Mechanism, Electronic Properties, and Applications*", **Materials Today**, **19 (14)**, 197-212, 2016
12. Rousan Debbarma, Sanjay Behura, Phong Nguyen, T. S. Sreeprasad, and **Vikas Berry***, " *Electrical Transport and Network Percolation in Graphene and Boron Nitride Mixed-Platelet Structures*", **ACS Applied Materials and Interfaces**, **8 (13)**, 8721-27, 2016
13. Sanjay Behura, Phong Nguyen, Songwei Che, Rousan Debbarma, and **Vikas Berry***, " *Large-Area, Transfer-Free, Oxide-Assisted, Synthesis of Hexagonal Boron Nitride Films and their Heterostructures with MoS₂ and WS₂*", **Journal of American Chemical Society**, **137 (40)**, 13060-13065, 2015
14. Sanjay Behura and **Vikas Berry***, " *Interfacial Non-Degenerate Doping of MoS₂ and other 2D Semiconductors*", **ACS Nano**, **9 (3)**, 2227-2230, 2015

15. T. S. Sreeprasad, Phong Nguyen, Ahmed Alshogheathri, Luke Hibbeler, Fabian Martinez, Nolan McNeil and **Vikas Berry***, "Graphene Cytobot: Single Spore Hydraulics for Electron-Tunneling Modulation between Quantum Dots for Biomechanical Applications", **Scientific Reports**, **5**, 9138, 2015
 - **Featured in Wall Street Journal, Washington Post, IEEE-Spectrum, ScienceDaily, Science World Report, Physorg, NanoWerk etc**
16. P. Nguyen, D. Briggs, C. Fager and **V. Berry***, "MoS₂ quantum dots interfaced with hydroscopic polyelectrolyte for water gated devices", **Science Letters**, **4**, 118, 2015
17. D. Briggs, S. Deng, and **V. Berry***, "Wrinkling Graphene with Bacteria and Functionalization of MoS₂ for Electronic Applications", **ECS Transactions**, **64** (6), 479-489, 2014
18. T. S. Sreeprasad, P. Nguyen, N. Kim, **V. Berry***, "Controlled, Defect-Guided, Metal-Nanoparticle-Incorporation onto MoS₂ via Chemical and Microwave Routes: Electrical, Thermal, and Structural Properties", **Nano Letters**, **13** (9), 4434-4441, 2013
 - **Featured in IEEE-Spectrum, Kurweil, ScienceDaily, Science World Report, Physorg, NanoWerk etc**
19. T. S. Sreeprasad, A. A. Rodriguez, J. Colston, A. Graham, E. Shishkin, V. Pallem, **V. Berry***, "Electron-Tunneling Modulation in Percolating-Network of Graphene Quantum Dots: Fabrication, Phenomenological Understanding, and Humidity/Pressure Sensing Applications", **Nano Letters**, **13** (4), 1757-1763, 2013
 - **Featured article in ScienceDaily, Physorg, eScienceNews, NanoWerk, Zee-News, etc**
20. **V. Berry***, "Impermeability of Graphene and its Applications", **Carbon**, **62**, 1-10, 2013 > 180 Citations
21. P. Nguyen, J. Li, T. S. Sreeprasad, K. Jasuja, N. Mohanty, M. Ikenberry, K. Hohn, V. Shenoy and **V. Berry***, "Covalent Functionalization of Dipole-Modulating Molecules on Trilayer Graphene: An Avenue for Graphene-Interfaced Molecular Machines", **Small**, **9**, 3823-3828, 2013
22. T. S. Sreeprasad and **V. Berry***, "How do the Electrical Properties of Graphene change with its Functionalization?", **Small**, **9**, 341-350, 2013
23. N. Mohanty, D. Moore, Z. Xu, T. S. Sreeprasad, A. Nagaraja, A. A. Rodriguez and **V. Berry***, "Nanotomy Based Production of Transferrable and Dispersible Graphene-Nanostructures of Controlled Shape and Size", **Nature Communications**, **3**, Article number: 844, 2012
 - **Featured article in Materials@Nature, EE-Times, Phys-Org, The Engineer and AzoNano, amongst other places.**
24. B. Kollbe Ahn, J. Sung, Y. Li, N. Kim, M. Ikenberry, K. Hohn, N. Mohanty, P. Nguyen, T. S. Sreeprasad, S. Kraft, **V. Berry***, and X. S. Sun*, "Synthesis and characterization of amphiphilic reduced graphene oxide with epoxidized methyl oleate", **Advanced Materials**, **24**, 16, 2123-2129, 2012
25. P. Nguyen and **V. Berry***, "Biological Interfaces with Graphene: Opportunities and Challenges", **Journal of Physical Chemistry Letters**, **3**, 1024-1029, 2012
26. N. Mohanty, M. Fahrenholz, A. Nagaraja, D. Boyle, and **V. Berry***, "Graphenic Encasement of Bacteria", **Nano Letters**, **11** (3), 1270-75, 2011
 - **Featured in Nature and Microscopy Today, amongst other places**
27. V. Berry, and R. F. Saraf, "Modulation of Electron-Tunneling in Nanoparticle Array by Sound Wave: An Avenue to High Speed, High-Sensitivity Sensors", **Small**, **7**, 17, 2485-90, 2011
28. S. Park, N. Mohanty, J. W. Suk, A. Nagaraja, J. An, R. D. Piner, W. Cai, **V. Berry*** and R. S. Ruoff*, "Biocompatible, robust free-standing paper composed of TWEEN/graphene composite", **Advanced Materials**, **22** (15) 1736-40, 2010 > 310 Citations
29. K. Jasuja, J. Linn, S. Melton, and **V. Berry***, "Microwave-Reduced Uncapped Metal Nanoparticles on Graphene: Tuning Catalytic, Electrical and Raman Properties", **Journal of Physical Chemistry Letters**, **1**, 1853-60, 2010 > 100 Citations

- **Amongst Top 10 most-cited papers in JPCL.** Featured in Science Daily, etc.
- 30. K. Jasuja and V. Berry*, "Implantation and Growth of Dendritic Gold Nanostructures on Graphene Derivatives: Electrical-Property-Tailoring and Raman-Enhancement", *ACS-Nano*, 3 (8), 2358-2366, 2009. **> 280 Citations**
- 31. N. Mohanty, A. Nagaraja, J. Armesto and V. Berry*, "High-Throughput, Ultrafast Synthesis of Solution Dispersed Graphene via Hydride Chemistry", *Small*, 6 (2) 226-31, 2009
 - **Featured in ScienceDaily, Physorg, Nanotech-Now, World-Gold-Council, etc**
- 32. N. Mohanty and V. Berry*, "Graphene-based Single-Bacterium Resolution Biodevice and DNA-Transistor - Interfacing Graphene-Derivatives with Nano and Micro Scale Biocomponents", *Nano Letters*, 8, 4469-4476, 2008 **> 890 Citations**
 - **Amongst Top 20 most cited papers in Nano Letters from 2008-2011; Featured in ScienceDaily, Nanotechnow, Physorg, ScienceCentric, Reuters, BioMedicine, eScienceNews, and others**
- 33. K. Jasuja, A. Thompson, and V. Berry*, "Reversibly Compressible and Stretchable 'Spring-like' Polymeric Nano-Junctions between Metal Nanoparticles", *Small*, 4, 2181-2886, 2008
- 34. K. Jasuja and V. Berry*, "Incorporating Azo-group-functionalized Molecular Junctions between Metal Nanoparticles to produce High-rectification-memory Nanodevices", *MRS proceedings*, 2008
- 35. V. Berry, and R. F. Saraf*, "Self-Assembly of Nanoparticles on Live Bacterium: An Avenue to Fabricate Electronic Devices", *Angewandte Chemie International Edition*, 44, 6668-6673, 2005 (Selected as Hot Paper)
 - **Featured in Nature News, Science News, MRS Bulletin, Royal Society of Chemistry etc.**
- 36. V. Berry, A. Gole, S. Kundu, C. Murphy, and R. F. Saraf*, "Deposition of CTAB Terminated Nanorods on Bacteria to Form Highly Conducting Hybrid System", *Journal of the American Chemical Society*, 127, 17600-17601, 2005
- 37. Agarwal, V. Berry, Alapati, and K. J. Nordheden*, "Characterization of SiCl₄/N₂ Plasmas", *Journal of Electrochemical Society*, 152, 210-212, 2005
- 38. V. Berry, S. Rangaswamy, and R. F. Saraf, "Highly Selective, Electrically Conductive Monolayer of Nanoparticles on Live Bacteria", *Nano Letters*, 4, 939-942, 2004

Under Review

- 39. S. K. Behura*, C. Wang, Y. Wen, and V. Berry*, "Graphene/Semiconductor Heterojunction Sheds Light on Emerging"
- 40. S. Deng, A. V. Sumant, and V. Berry*, "Strain Engineering in Two-Dimensional Nanomaterials Beyond Graphene"
- 41. K. Jasuja, K. Ayinde, C. Davis, S. K. Behura, M. Ikenberry, D. Moore, K. Hohn and V. Berry*, "Introduction of Protonated Sites on Exfoliated, Large-Area Sheets of Hexagonal Boron Nitride"
- 42. P. Nguyen, S. K. Behura, M. R. Seacrist, and V. Berry*, "Carbon-Radical's Intra-Grain-Diffusion for Wafer-Scale, Direct Growth of Graphene on Silicon-Based Dielectrics"
- 43. R. Debbarma, S. K. Behura*, Y. Wen, S. Che, and V. Berry*, "WS₂-Induced Enhanced Optical Absorption and Efficiency in Graphene/Silicon Heterojunction Photovoltaic Cells"

BOOK CHAPTERS

- 44. *Biosensors Based on Nanomaterials and Nanodevices*: Chapter: "Bioelectronics on Graphene" by Vikas Berry; **CRC Press - Taylor and Francis Publication**, 2013.
- 45. *Chemistry of Graphene*: Chapter: 'Bioelectronic Devices from Graphene' by Vikas Berry; **Pan Stanford**

Publishing (to be published in 2013)

PATENTS:

GRANTS

46. "Production of Graphene Nanoribbons and Quantum Dots with Controlled Dimensions and Crystallographic Orientation", Vikas Berry, Nihar Mohanty and David Moore, **US Patent US9272911 (2016)**
47. "Direct formation of graphene on semiconductor substrates and structures prepared thereby", M.R. Seacrist and Vikas Berry, **US Patent US20160233305 (2016)**
48. "Direct and sequential formation of monolayers of boron nitride and graphene on substrates", Michael R. Seacrist, Vikas Berry and Phong T. Nguyen, **US Patent US9029228 (2015)**
49. "Direct formation of graphene on semiconductor substrates", Michael R. Seacrist and Vikas Berry, **Patent Number US8884310 (2014)**
50. "Fabrication of Ultra Long Necklace of Nanoparticles", Ravi Saraf, S. Niu, V. Berry, V. Maheshwari, **Patent Number: US7749561 (2010)**

APPLICATIONS

51. "Direct Formation of Hexagonal Boron Nitride on Silicon-Based Dielectrics", M.R. Seacrist, V. Berry, S. Behura, P. Nguyen, **US Patent Sr. No. 62/335,149 (2016)**
52. "Epitaxial Growth of Defect-free, Wafer-scale Single-Layer Graphene on Thin Films of Cobalt", M.R. Seacrist, V. Berry, S. Behura, P. Nguyen, **US Patent Sr. No. 62/235, 800 (2015)**
53. "Live Bioelectronic cell gated transistor", R. F. Saraf, V. Berry, M. Inan, S. Niu (**USPTO Application # 20100243984**) (2010)
54. "Highly resolved, low noise, room-temperature coulomb staircase and blockade up to 2.2V in isolated 50 micron long one dimensional necklace of 10 nm Au particles", R. F. Saraf, V. Berry, S. Niu (**US Patent application number: US 11/477,263**)
55. "Graphene-Based Single-Bacterium Resolution Biodevice and DNA Transistor", Vikas Berry and Nihar Mohanty (**KSU Disclosure Ref. No. 09-22**)

8 current disclosures at UIC.

FUNDING SUPPORT FOR RESEARCH

TOTAL = \$ 3.47 Million As Sole PI = \$2.18 Million

1. PI "Engineering the Bacterial Membrane with Conductive Pathways for Enhanced Efficiency of Electron-Transfer to the Anode in Microbial-Fuel-Cells"
Office of Naval Research; Amount \$510,000; Start Date: 07/01/2018; Period = 3 year
2. PI "Indo-US Virtual Networked Joint Center – 2D Nanomaterials for Energy Storage"
Govt. of India – Indo-US Science and Technology Forum; Amount \$68,857; Start Date: 03/01/2018; Period = 2 year
3. Co-PI "Wide Bandgap Semiconductor 1D Nanowires-2D Materials Core-Shell Architecture for Photovoltaic Energy Conversion"; PI: Sanjay Behura
Dimerond Technologies; Amount \$100,000; Start Date: 05/01/2018; Period = 1 year

4. PI "Enabling the Incorporation of DotzNano – Graphene Quantum Dots into Ultrahigh-Sensitivity Humidity Detectors"
DotzNano Inc; Amount \$91,000; Start Date: 05/01/2017; Period = 1 year
5. PI "ICORP: Large-Area η 6-Functionalized Graphene Sheets with Preserved Lattice for Semiconductor Applications and Industry".
NSF; Amount \$ 50,000; Start Date: 11/15/14; Period = 0.5 Year
6. PI "Growth of Large-Area Graphene-BN and Transition Metal Dichalcogenide Sandwich Systems and Detailed Characterization of their Structural, Electrical and Interfacial Properties".
SunEdison Semiconductors Inc; Amount \$ 210,750; Start Date: 09/01/14; Period = 2 Year
7. PI "Growth and Transfer of Large-Area Graphene on Silicon and Silica Substrates and its Surface Engineering".
MEMC Inc; Amount \$ 40,000; Start Date: 04/01/14; Period = 3 Months
8. PI "Detection of Cancer Market with Graphene Sensors".
Terry C. Johnson Center for Basic Cancer Research; Amount \$ 25,500; Start Date: 05/01/13; Period = 1 Year
9. PI "*Tapered* Graphene Nanoribbons of Controlled Width and Tapering Angle: Carrier-Tunable Diode Transistor".
Office of Naval Research; Amount \$ 300,000; Start Date: 07/01/11; Period = 3 Year
10. PI "CAREER: Detailed Characterization of Graphene Quantum Dots of Controlled Size, Shape and Chemistry".
NSF; Amount \$ 400,000; Start Date: 02/01/11; Period = 5 Year
11. PI "Growth and Transfer of Large-Area Graphene on Silicon and Silica Substrates and its Surface Engineering".
MEMC Inc; Amount \$ 237,913; Start Date: 04/01/11; Period = 3 Year
12. PI "Detailed Surface Engineering and Electrical Characterization of π -Functionalized Graphene Sheets and Ribbons with Preserved Lattice and Electronic Characteristics".
NSF; Amount \$ 301,704; Start Date: 08/15/10; Period = 3 Year
13. PI "EAGER: Graphene-Nanoribbons of Controlled Width and Crystallographic-Orientation".
NSF; Amount \$ 76,000; Start Date: 08/01/09; Period = 1 Year
14. PI "Detection of Cancer Market with Graphene Sensors".
Terry C. Johnson Center for Basic Cancer Research; Amount \$ 25,500; Start Date: 04/01/10; Period = 1 Year
15. Co-PI, "MRI: Acquisition of a Field Emission Scanning Electron Microscope for Kansas State University", PI: James Edgar, Co-PIs: Christopher Sorensen, and Jun Li.
NSF; Amount: \$ 518,928; Start Date: 09/01/09; Period = 3 years
16. PI "Study of Graphene Nanoribbon's Structural Properties using STM: Determining Edge-Crystallographic-orientation and defects"
Brookhaven National Laboratory; Equipment Usage Time Granted on STM; Period = 3 Years
17. PI "Big-XII Fellowship: Collaboration Research in Graphene Biointerfacing"
KSU; Amount \$ 3,000; Start Date: 05/01/09; Period = 1 Year
18. PI "Presenting at Trends in Nanotechnology - 2008"

KSU: Presidential Faculty Development Award; \$ 2,000; 2008

19. PI *“Recent Advances in Graphene and Related Materials conference held in Singapore”*
KSU: Presidential Faculty Development Award; \$ 2,500; 2010

PRESENTATIONS

1. **Keynote Talk**, Vikas Berry, “Chemical and Structural Manipulation of Graphene and other 2D Nanomaterials for Electronics and Optoelectronics”, **International Symposium on Functional Materials**, Chandigarh, India, April, 2018
2. **Invited Talk**, Shikai Deng, Enlai Gao, Soumyo Sen, Sreeprasad Sreenivasan, Sanjay Behura, Petr Kral, Zhiping Xu, Vikas Berry, “Confined, Oriented and Electrically Anisotropic Graphene Wrinkles on Bacteria”, **Materials Research Society**, Boston, November 2017
3. Phong Nguyen, Sanjay Behura, Michael Seacrist, Vikas Berry, “Chemistry of Direct, Wafer-Scale and High-Quality Graphene Synthesis on Silicon-Based Dielectrics via Chemical Vapor Deposition”, **Materials Research Society**, Boston, November 2017
4. Sanjay Behura, Phong Nguyen, Chen Wang, Songwei Che, Rousan Debbarma, Michael Seacrist, Vikas Berry, “All CVD Direct Growth of Large-Scale Graphene and Hexagonal Boron Nitride Heterostructures”, **Materials Research Society**, Boston, November 2017
5. Songwei Che, Kabeer Jasuja, Sanjay Behura, T. S. Sreeprasad, and Vikas Berry, “Retained Carrier-Mobility and Enhanced Plasmonic-Photovoltaics of Graphene via Ring-Centered $\eta 6$ Functionalization and Nano-Interfacing”, **Materials Research Society**, Boston, November 2017
6. Bijentimala Keisham, Arron Cole, Phong Nguyen, Ankit Mehta and Vikas Berry, “Cancer Cell Hyperactivity and Membrane Dipolarity Monitoring Via Raman Mapping of Interfaced Graphene: Towards Non-Invasive Cancer Diagnostics” **AICHE Annual Meeting**, Minneapolis, October, 2017
7. Deisy Arrington, Dylan Lynch and Vikas Berry, “Detailed Characterization and Fabrication of 3DPrinted Graphene/Polymer Structures Forheterojunction-Devices with MoS2 and Other 2D Nanomaterials” **AICHE Annual Meeting**, Minneapolis, October, 2017
8. Sanjay Behura, Kai-Chih Chang, Yu Wen, Rousan Debbarma, Phong Nguyen, Songwei Che, Shikai Deng, Michael Seacrist and Vikas Berry, “Photovoltaic and Spectral Response of WS2/Silicon Heterojunctions”, **AICHE Annual Meeting**, Minneapolis, October, 2017
9. Sanjay Behura, Phong Nguyen, Chen Wang, Songwei Che, Rousan Debbarma, Michael R. Seacrist and Vikas Berry, “All CVD Direct Growth of Large-Scale Graphene and Hexagonal Boron Nitride Heterostructures”, **AICHE Annual Meeting**, Minneapolis, October, 2017
10. **Invited Talk**, Vikas Berry, “Chemical, Interfacial, and Opto/Electronic Properties of CVD Grown Graphene, hBN, MoS2, WS2 and Their Heterostructures”, **AICHE Annual Meeting**, Minneapolis, October, 2017
11. Sangil Kim, Aaditya Pdendse, Semih Cetindag, Sanjay Behura, Vikas Berry and Jerry Shan, “Boron-Nitride-Nanopore Membranes for Osmotic Power Harvesting”, **AICHE Annual Meeting**, Minneapolis, October, 2017
12. Shikai Deng and Vikas Berry, “Wrinkled MoS2 Field-Effect Transistors”, **AICHE Annual Meeting**, Minneapolis, October, 2017
13. Songwei Che, Kabeer Jasuja, Sanjay Behura, Phong Nguyen, Sreenivasan Sreeprasad and Vikas Berry, “Retained Carrier-Mobility and Enhanced Plasmonic-Photovoltaics of Graphene Via Ring-Centered $\eta 6$ Functionalization and Nano-Interfacing”, **AICHE Annual Meeting**, Minneapolis, October 2017
14. **Invited Talk**, Vikas Berry, “Structural and Chemical Manipulation of Graphene”, **Nanjing Technology University**, Nanjing, China, November 20, 2017
15. **Invited Talk**, Vikas Berry, “Structural and Chemical Manipulation of Graphene”, **South Dakota**

- School of Mines and Technology**, Rapid City, SD, October, 2017
16. Deisy Arrington, Dylan Lynch, and Vikas Berry, "Detailed Characterization and Fabrication of 3D Printed Graphene/Polymer Structures for Heterojunction-Devices with MoS₂ and Other 2D Nanomaterials", **Argonne National Laboratory**, Chicago, May 8, 2017
 17. Songwei Che, Kabeer Jasuja, Sanjay K. Behura, Phong Nguyen, T. S. Sreeprasad, and Vikas Berry, "Retained Carrier-Mobility and Enhanced Plasmonic-Photovoltaics of Graphene via ring-centered η₆ Functionalization and Nano-Interfacing", **Argonne National Laboratory**, Chicago, May 8, 2017
 18. Sanjay Behura, Kai-Chih Chang, Yu Wen, Rousan Debbarma, Phong Nguyen, Songwei Che, Shikai Deng, Michael R. Seacrist and Vikas Berry, "Photovoltaic and Spectral Response of Monolayer WS₂/Silicon Heterojunctions", **Argonne National Laboratory**, Chicago, May 8, 2017
 19. Rousan Debbarma, Sanjay Behura, Yu Wen, Songwei Che, and Vikas Berry, "Improved Performance of Graphene-Silicon Solar Cells with Deposition of WS₂ Layers", **Argonne National Laboratory**, Chicago, May 8, 2017
 20. **Invited Talk**, Vikas Berry, "Structural and Chemical Manipulation of Graphene", **Argonne National Laboratory**, Chicago, July 8, 2016
 21. Shikai Deng, Enlai Gao, Yanlei Wang, Soumyo Sen, Sreeprasad Sreenivasan, Sanjay Behura, Petr Král, Zhiping Xu and Vikas Berry, "Electrical Properties of Controlled, Longitudinal Wrinkles on Graphene Produced Via Bacterial-Scaffold Shrinkage", **AIChE Annual Meeting**, San Francisco, November, 2016
 22. Songwei Che, Phong Nguyen, Sanjay Behura, Kabeer Jasuja, Sreeprasad Sreenivasan and Vikas Berry, "Vapor-Phase η₆ Functionalization of Graphene with Retained Charge Carrier Mobility", **AIChE Annual Meeting**, San Francisco, November, 2016
 23. Phong Nguyen, Sanjay Behura, Rousan Debbarma, Michael Seacrist and Vikas Berry, "Mechanism of Direct Growth of Graphene on Si-Based Dielectric Substrates Via Cu Grain Boundaries", **AIChE Annual Meeting**, San Francisco, November, 2016
 24. Rousan Debbarma, Sanjay Behura, Phong Nguyen, Sreeprasad Sreenivasan and Vikas Berry, "Electrical Transport and Network Percolation in Graphene and Boron Nitride Mixed-Platelet Structures", **AIChE Annual Meeting**, San Francisco, November, 2016
 25. Bijentimala Keisham, Arron Cole, Phong Nguyen, Ankit Mehta and Vikas Berry, "Micro-Raman Phonon-Energy Mapping of Cell/Graphene Interface for Non-Invasive Cancer Diagnosis Via Ultrasensitive Cellular Potential and Activity Measurements", **AIChE Annual Meeting**, San Francisco, November, 2016
 26. Bijentimala Keisham, Arron Cole, Phong Nguyen, Ankit Mehta and Vikas Berry, "Micro-Raman Phonon-Energy Mapping of Cell/Graphene Interface for Non-Invasive Cancer Diagnosis Via Ultrasensitive Cellular Potential and Activity Measurements", **AIChE Midwest Regional Conference**, Chicago, Feb 2016
 27. Sanjay Behura, Kai-Chih Chang, Rousan Debbarma, Phong Nguyen, Michael R. Seacrist, and Vikas Berry, "Directly Grown WS₂/p-Si Heterojunction for Photovoltaics", **MRS**, Boston, Nov 2016
 28. Sanjay Behura, Phong Nguyen, Rousan Debbarma, Songwei Che, Michael R. Seacrist, and Vikas Berry, "Direct Growth of Large-Area, Ultra-Smooth Hexagonal Boron Nitride for Graphene Heterostructures: Towards Scalable 2D-Heterostructured Circuitry", **MRS**, Boston, Nov 2016
 29. Shikai Deng, Enlai Gao, Yanlei Wang, Soumyo Sen, T. S. Sreeprasad, Sanjay Behura, Petr Kral, Zhiping Xu, Vikas Berry, "Confined, Oriented and Electrically Anisotropic Graphene Wrinkles on Bacteria", **MRS**, Boston, Nov 2016
 30. Songwei Che, Phong Nguyen, Sanjay Behura, Kabeer Jasuja, Sreeprasad Sreenivasan, Vikas Berry, "Vapor-Phase η₆ Functionalization of Graphene with Retained Charge Carrier Mobility", **MRS**, Boston, Nov 2016
 31. Shikai Deng, Vikas Berry, "Wrinkled MoS₂ Field-Effect Transistor", **MRS**, Boston, Nov 2016
 32. **Invited Talk**, Vikas Berry, "Structural and Chemical Manipulation of Graphene", **University of**

- Central Florida**, Orlando, FL, Feb, 2017
33. **Invited Lecture**, Vikas Berry, "Electrical Properties of Graphene", **University of Illinois at Chicago**, Chicago, CHE 494 Course Lecture, Feb 2017
 34. Nguyen, Phong, Sanjay Behura, Vikas Berry, and Mike Seacrist, "Direct Formation of Monolayer Graphene on Si-Based Dielectrics", **Argonne National Laboratory**, Chicago, October 8, 2015
 35. Deng, Shikai, Enlai Gao, Yanlei Wang, Soumyo Sen, T. S. Sreeprasad, Sanjay Behura, Petr Král, Zhiping Xu, and Vikas Berry, "Bio-Interfaced Wrinkling of Graphene Materials: Structure and Electrical Properties", **Argonne National Laboratory**, Chicago, October 8, 2015
 36. Behura, Sanjay, Phong Nguyen, Songwei Che, Rousan Debbarma, and Vikas Berry, "Direct Synthesis of Hexagonal Boron Nitride Films and Their Heterostructures with Transition Metal Dichalcogenides", **Argonne National Laboratory**, Chicago, October 8, 2015
 37. Sanjay Behura, Kai-Chih Chang, Rousan Debbarma, Phong Nguyen, Michael R. Seacrist, and Vikas Berry, "Photovoltaic Characteristics WS₂/p-Si Heterojunction Developed by Chemical Vapor Deposition", **MRS Fall Meeting 2015**, Nov. 29-Dec. 4, 2015, Boston, MA, USA.
 38. Songwei Che, Phong Nguyen, Sanjay Behura, Kabeer Jasuja, T. S. Sreeprasad, and Vikas Berry, "Vapor-phase eta-6 functionalization of graphene with retained charge carrier mobility", **MRS Fall Meeting 2015**, Nov. 29-Dec. 4, 2015, Boston, MA, USA.
 39. S. Behura, P. Nguyen, M. R. Seacrist, V. Berry, "High-quality, large-area, epitaxial growth of single-layer graphene on thin films of cobalt," **MRS Fall Meeting 2015**, Nov. 29-Dec. 4, 2015, Boston, MA, USA.
 40. Vikas Berry, "Structural and Chemical Manipulation of 2D Nanomaterials: Graphene, MoS₂, Boron Nitride" **Argonne National Laboratory**, Chicago, April 6, 2016
 41. Vikas Berry and Sanjay Behura, "*Development of 2D nanomaterials and Heterostructures for Nano and Opto-Electronics*", SunEdison Semiconductors, St. Luis, Nov 2015
 42. Shikai Deng, T. S. Sreeprasad, and Vikas Berry, "*Electrical Properties of Controlled, Longitudinal Wrinkles on Graphene Produced Via Bacterial-Scaffold Shrinkage*", **Electrochemical Society**, Chicago, May 2015
 43. Songwei Che, T. S. Sreeprasad, Phong Nguyen, and Vikas Berry, "*Eta6 chemical Modification of Epitaxial Graphene: An Avenue for Non Destructive Surface Functionalization and Atomic Layer Deposition*", **Electrochemical Society**, Chicago, May 2015
 44. Sanjay Behura, Rousan Debbarma, Phong Nguyen, T. S. Sreeprasad, and Vikas Berry, "*Chemically-Derived Graphene and Boron Nitride Heterostructures for Optoelectronic Applications*", **Electrochemical Society**, Chicago, May 2015
 45. Donovan Briggs, Phong Nguyen, Cody Fager, T. S. Sreeprasad, and Vikas Berry, "*Carrier Doping of Few-Layer MoS₂ with Ionic Polymers and MoS₂ Quantum Dots with Atmospheric Water*", **Electrochemical Society**, Chicago, May 2015
 46. Vedhikha Tiruparkadal Parthasarathy, and Vikas Berry, "*MoS₂ Devices Using Pencil Circuits*", **Electrochemical Society**, Chicago, May 2015
 47. **Keynote Talk**, Vikas Berry, "Graphene Based Biosensors", **ICREA Workshop on Graphene Nanobiosensors**, Barcelona, Spain May 2015
 48. **Invited Talk**, Vikas Berry, "Graphene Nanotechnologies", **Georgia Tech**, Atlanta, April 2015
 49. **Invited Talk**, Vikas Berry, "Graphene Nanotechnologies", **Illinois Institute of Technology**, Chicago, January 2015
 50. **Invited Talk**, Vikas Berry, "The Fascinating World of 2D Array of Atoms: Graphene and MoS₂ based Electronics", **BioEngineering at University of Illinois at Chicago**, Chicago, Jan 2015
 51. **Invited Talk**, Vikas Berry, "Wrinkling Graphene with Bacteria and Functionalization of MoS₂ for Electronic Applications", **ECS**, Cancun, September 2014
 52. **Invited Talk**, Vikas Berry, "Arrays of Graphene Quantum Dots, Fabrication of Tapered Graphene Nanoribbons and Functionalization of 2D Nanomaterials for Electronic Applications", **Materials Research**

- Society**, San Francisco, Spring 2014
53. Donovan Briggs and Vikas Berry, “Carrier Doping of Few-Layer MoS₂ with Ionic Polymers”, **Materials Research Society**, San Francisco, Spring 2014
 54. T. S. Sreeprasad, Phong Nguyen, Namhoon Kim, and Vikas Berry, “Controlled, Defect-Guided, Metal-Nanoparticle Incorporation onto MoS₂ via Chemical and Microwave Routes: Electrical, Thermal, and Structural Properties”, **Materials Research Society**, San Francisco, Spring 2014
 55. T. S. Sreeprasad, Phong Nguyen, Luke Hibbeler, Ahmed Alshogheathri, and Vikas Berry*, “Graphene Quantum Dot Based Bio-Electronic Device Operated by Bacterial Mechanics: Avenue for Bio-Hybrid Sensors”, **Materials Research Society**, San Francisco, Spring 2014
 56. Shikai Deng, T. S. Sreeprasad and Vikas Berry*, “Electrical Control via Precise Wrinkling of Graphene with Bacterial Cells”, **Materials Research Society**, San Francisco, Spring 2014
 57. **Invited Talk**, Vikas Berry, “Graphene Quantum Dots and MoS₂ Functionalization”, **ICONSAT Conference**, Chandigarh, India, 2014
 58. **Invited Talk**, Vikas Berry, “Graphene, a 2D Network of Carbon Atoms: Properties and Applications”, **IISc Bangalore**, Bangalore, India, 2014
 59. Vikas Berry, “Graphene, a 2D Network of Carbon Atoms: Properties and Applications of Graphene Quantum Materials and Graphene Encased Cells”, **Graphene Brazil – 2013 Conference**, Buzius, Brazil, September 2013
 60. **Invited Talk**, Vikas Berry, “Graphene: Properties, Phenomena and Applications of a 2D Network of Carbon Atoms”, **University of Illinois at Chicago**, Chicago, IL, May 2013
 61. **Invited Talk**, Vikas Berry, “Graphene Encasement for Retaining the Wet-Behavior of Living Cells and Solution-Dispersed Nanomaterials”, **American Chemical Society**, New Orleans, April 2013
 62. **Invited Talk**, Vikas Berry, “Graphene Quantum Dots and Nanoribbons of Controlled Structural, Electrical and Optical Properties; and Graphenic Molecular Machines”, **American Chemical Society**, New Orleans, April 2013
 63. T. S. Sreeprasad, Phong Nguyen, Kabeer Jasuja and Vikas Berry, “η6 Chemical Modification of Epitaxial Graphene: An Avenue for Non Destructive Surface Functionalization and Atomic Layer Deposition”, **Materials Research Society**, Mar 2013
 64. Vasanta Pallem, Nihar Mohanty, and Vikas Berry, “Impermeable Graphene Encasements for Liquids, Living Cells and Solution-dispersed Nanomaterials”, **Materials Research Society**, Mar 2013
 65. T. S. Sreeprasad, Alfredo A. Rodriguez, Jonathan Colston, Augustus Graham, Evgeniy Shishkin, Vasanta Pallem, and Vikas Berry, “Oxidative Cutting of Graphene Nanoribbons into Quantum Dots and Electron-tunneling Modulation between Graphene Quantum Dots: Avenue for Novel Sensing Devices”, **Materials Research Society**, Mar 2013
 66. **Invited Talk**, Vikas Berry, “Graphene: Properties, Phenomena and Applications of a 2D Network of Carbon Atoms”, **Tufts University**, Medford, MA, Feb 2013
 67. **Invited Talk**, Vikas Berry, “Graphene: Properties, Phenomena and Applications of a 2D Network of Carbon Atoms”, **Texas A&M**, College Station, TX, Feb 2013
 68. **Invited Talk**, Vikas Berry, “Graphene-Based Sensors for Molecular-Mechanics”, **University of Pittsburgh**, Pittsburgh, PA, Jan 2013
 69. **Invited Talk**, Vikas Berry, “Graphene Sensors and Quantum Materials”, **University of Kansas**, Lawrence, Sep 2012
 70. **Invited Talk**, Vikas Berry, “Nanotomy of Graphite to Produce Graphene Nanostructures of Controlled Structure and Transport Properties; and Graphene-Based Sensors for Molecular-Mechanics”, **University of Houston**, Houston, TX, Aug 2012
 71. Vikas Berry, “eta-6 Chemical Modification of Graphene”, **NSF-CMMI-Awardee Conference**, Boston, July 2012
 72. **Invited Talk**, Vikas Berry, “Transferrable and Dispersible Graphene Nanostructures of Controlled

- Structural, Electrical and Optical Properties”, **ECS**, Seattle, May 2012
73. **Invited Talk**, Vikas Berry, “Large-Scale Production of Transferrable and Dispersible Graphene Nanostructures of Controlled Structural, Electrical and Optical Properties; and Principles Defining Graphene-based Sensors eversible”, **MRS**, San Francisco, Apr 2012
 74. Phong Nguyen, T. S. Sreeprasad, Nihar Mohanty, Kabeer Jasuja, and Vikas Berry, “Reversible and Robust Carrier Doping in Graphene *via* Mechanical Actuation of Tethered Azobenzene”, **APS**, Boston, Mar 2012
 75. T. S. Sreeprasad, Nihar Mohanty, David Moore, Zhiping Xu, Ashvin Nagaraja, Alfredo A. Rodriguez, and Vikas Berry, “Lattice-Nanotomy for Large-Scale Production of Transferrable and Dispersible Graphene-Nanostructures of Controlled Shape and Size”, **APS**, Boston, Mar 2012
 76. T. S. Sreeprasad, Phong Nguyen, Joshua Podrebarac, Jenae Tate, and Vikas Berry, “Impermeable “single-monolayer” Graphenic encasement of bacteria for high vacuum Transmission electron microscopy”, **APS**, Boston, Mar 2012
 77. T. S. Sreeprasad, Phong Nguyen, and Vikas Berry, “A study on tapered graphene nanoribbons with controlled angle: Fabrication and conductivity studies”, **APS**, Boston, Mar 2012
 78. Phong Nguyen, T. S. Sreeprasad, Kabeer Jasuja, and Vikas Berry, “eta-6 Chemical Modification of Epitaxial Graphene: An Avenue for Non Destructive Surface Functionalization and Atomic Layer Deposition”, **APS**, Boston, Mar 2012
 79. **Invited Talk**, Vikas Berry, “Graphene Science and Technology”, **Kansas State University**, Course Lecture = DEN 399, February 2012
 80. **Invited Talk**, Vikas Berry, “Principles Defining the Operation of a Novel Graphene-Based Molecular-Machine”, **University of Arkansas**, Fayetteville, AR February 2012
 81. Vikas Berry, “*Tapered* Graphene Nanoribbons of Controlled Tapering Angle: Structurally Tuning the Charge-Carrier Properties”, **Office of Naval Research**, Monterey, CA December 2011
 82. **Plenary Lecture**, Vikas Berry, “Impact of Deformation on Properties and Devices of Graphene”, **Tsinghua University, Beijing, China**, Sep 2011
 83. **Invited Talk**, Vikas Berry, “Graphene: Properties, Phenomena and Applications of a 2D Network of Carbon Atoms”, **Indian Institute of Technology**, New Delhi, India, Sep 2011
 84. Kabeer Jasuja, Kayum Ayinde, Christina Davis, Myles Ikenberry, Keith L. Hohn and Vikas Berry, “Synthesis of Solvent Dispersed Ultrathin Sheets of Boron Nitride” **AICHE**, Minneapolis, Oct 2011
 85. Nihar Mohanty, Ashvin Nagaraja, Monica Fahrenholtz, Daniel L. Boyle and Vikas Berry, “Impermeable Graphenic Wrapping of Bacteria” **AICHE**, Minneapolis, Oct 2011
 86. Phong Nguyen, Kabeer Jasuja, Mohanty Nihar and Vikas Berry, “Detecting Molecular Motion On Graphene: An Opto-Electromechanical Logic Device” **AICHE**, Minneapolis, Oct 2011
 87. Nihar Mohanty and Vikas Berry, “High-Throughput Production of Graphene Nanostructures (nanoribbons and quantum dots) with Controlled Dimensions and Smooth Edge Terminations” **AICHE**, Minneapolis, Oct 2011
 88. **Invited Talk**, Vikas Berry, “Graphene: Properties, Phenomena and Applications of a 2D Network of Carbon Atoms”, **MEMC Inc**, Saint Louis, July 2011
 89. **Invited Talk**, Vikas Berry, “Graphene: Properties, Phenomena and Applications of a 2D Network of Carbon Atoms”, **NSF GK-12 Talk**, Manhattan, KS, June 2011
 90. Phong Nguyen, Kabeer Jasuja, Nihar Mohanty, and Vikas Berry, “Molecular Mechanics on Graphene Surface and its Detection”, **APS**, Dallas, Mar 2011
 91. Vikas Berry, Nihar Mohanty, David Moore, and Ashvin Nagaraja, “Large-scale production of Graphene Nanoribbons with controlled width: Electrical Properties of Graphene Nanoribbon Films”, **APS**, Dallas, Mar 2011
 92. **Invited Talk**, Vikas Berry, “Graphene Research”, **Chemistry Graduate Seminar**, Chemistry Department, Kansas State University, Feb 2011

93. **Invited Talk**, Vikas Berry, "Graphene: Properties, Phenomena and Applications of a 2D Network of Carbon Atoms", **UNL Seminar Series - Department of Engineering Mechanics**, University of Nebraska. Lincoln, NE, Feb 2011
94. **Invited Talk**, Vikas Berry, "Graphene: Properties, Phenomena and Applications of a 2D Network of Carbon Atoms", **Physics Colloquia Series**, Physics Department, Kansas State University, Nov 2010 (Invited)
95. Kabeer Jasuja, Nathan Lechtenberg and Vikas Berry, "*Defect-Free Functionalization of Graphene for Building Ultrasensitive Graphene Biochemical Sensors*", **AICHE**, Salt Lake City, UT, November 2010
96. Kabeer Jasuja, Nihar Mohanty and Vikas Berry, "*Detection of Molecular Mechanics On Graphene Surface: An Electromechanical Logic Device*", **AICHE**, Salt Lake City, UT, November 2010
97. Kabeer Jasuja, Josh Linn and Vikas Berry, "*Microwave-Activated Functionalization of Bare-Surfaced Metal Nanoparticles On Graphene Derivatives: Avenue for Carrier Manipulation, Enhanced Catalytic Activity and Raman Amplification*", **AICHE**, Salt Lake City, UT, November 2010
98. Nihar Mohanty, Ashvin Nagaraja, Monica Frey, Daniel L. Boyle and Vikas Berry, "*Award Submission: Live Bacterium Wrapping with Graphene Peptide Nano-Swaddler: a New Paradigm for Electron Microscopy and Raman Enhancement*", **AICHE**, Salt Lake City, UT, November 2010
99. Vikas Berry, Kabeer Jasuja, Nihar Mohanty, Ashvin Nagaraja, and Jose Armesto, " *η 6 Chemical Modification of Epitaxial Graphene: A New Chemical Route for Atomic Layer Deposition and Fabricating Ultrasensitive Biological Sensors*", **AICHE**, Salt Lake City, UT, November 2010
100. Nihar Mohanty, Ashvin Nagaraja, Monica Frey, Daniel L. Boyle and Vikas Berry, "*Live Bacterium Wrapping with Graphene Peptide Nano-Swaddler: a New Paradigm for Electron Microscopy and Raman Enhancement*", **AICHE**, Salt Lake City, UT, November 2010
101. **Invited Talk**, Vikas Berry, "*Chemical and Structural Modification of Graphene for Semiconducting and Bioelectronic Applications*", **Recent Advances in Graphene and Related Materials**, Singapore, Aug 2010
102. Kabeer Jasuja, Vikas Berry, "*Bio-chemical functionalization of graphene for cancer cell detection*", **Annual Biochemical Engineering Symposium**, Manhattan, KS, Apr 2010
103. Nihar Mohanty, Ashvin Nagaraja, Monica Frey, Vikas Berry, "*Live Bacterium Wrapping with Graphene Peptide Nano-Swaddler: a New Paradigm for Electron Microscopy and Raman Enhancement*", **Annual Biochemical Engineering Symposium**, Manhattan, KS, Apr 2010
104. Nihar Mohanty, Angela D. Adams, Rebecca Horvat, Duy H. Hua, Vikas Berry, "*Ultrafast, Label-free detection of Pathogenic Bacteria via Peptide-modified-Graphene bio-sensor*", **Annual Biochemical Engineering Symposium**, Manhattan, KS, Apr 2010
105. Vikas Berry, Kabeer Jasuja, Joshua Linn, " *π - π Functionalization of Graphene: Avenue for building Ultrasensitive Graphene BioSensors*", **APS**, Portland, OR, March 2010
106. Vikas Berry, Nihar Mohanty, Ashvin Nagaraja, Monica Frey, "*Bacterium Wrapping with Graphene for Non-destructive TEM Imaging and Raman Enhancement*", **APS**, Portland, OR, March 2010
107. Vikas Berry, Nihar Mohanty, Ashvin Nagaraja, Jose Armesto, "*High-Throughput, Ultrafast Synthesis of Solution Dispersed Graphene via a Facile Hydride Chemistry*", **APS**, Portland, OR, March 2010
108. Vikas Berry, Kabeer Jasuja, Nihar Mohanty, "*Detection of Molecular Mechanics on Graphene surface: An Electromechanical Logic Device*", **APS**, Portland, OR, March 2010
109. Vikas Berry, Kabeer Jasuja, "*Real-Time Study of Stretching of Molecular Junctions between Nanoparticles: An Avenue to Build Molecular-Electromechanical Devices*", **AICHE**, Nashville, TN, November 2009
110. Vikas Berry, Nihar Mohanty, Kabeer Jasuja, "*Reversible, Ultrafast Switching of Azo-Benzene-Tethered On Graphene FETs*", **AICHE**, Nashville, TN, November 2009
111. Vikas Berry, Ashvin Nagaraja, Kabeer Jasuja, Nihar Mohanty, "*Ultrafast, Highly Sensitive Label-Free Pathogen Detection Via Chemically Modified Graphene (CMG) Sensors*" **AICHE**, Nashville, TN, November 2009

112. Vikas Berry, Nihar Mohanty, Ashvin Nagaraja, and Jose Armesto, "High-Throughput, Ultrafast Synthesis of Solution Dispersed High-Quality Graphene via a Novel Hydride Chemistry: Raman Spectra and Electrical Gating", **AICHE**, Nashville, TN, November 2009
113. Vikas Berry, Kabeer Jasuja, "Novel Chemical Schemes to Functionalize Graphene without Introducing Defects: Avenue for Building Sensitive Graphene Sensors", **AICHE**, Nashville, TN, November 2009
114. Vikas Berry, Kabeer Jasuja, "Dendritic (Snow-Flake-Shaped) Gold-Nanostructures Templated On Graphene: Tuning Electrical Properties and Raman Spectra", **AICHE**, Nashville, TN, November 2009
115. Vikas Berry, Kabeer Jasuja, Josh Linn, Steven Melton, "Microwave Induced in-Situ Deposition of Gold and Silver Nanostructures On Graphene: Avenue to Build Graphene-Metal Interfaces", **AICHE**, Nashville, TN, November 2009
116. Vikas Berry, Nihar Mohanty, Ashvin Nagaraja, Monica Frey, "Wrapping of a Single Live Bacterium by Biochemically Modified Graphene (BMG) Sheets: Avenues to Build Nano-Biomachines", **AICHE**, Nashville, TN, November 2009
117. **Invited Talk**, Vikas Berry, "On-Surface Biomodification and Molecular-interfacing of Graphene: Study of its Electrical and Structural Properties", **BACON**, Boston University, Boston, MA, June 2009
118. Vikas Berry and Nihar Mohanty, "Effect of Single Bacterium Cell and DNA Attachment on the Electrical Properties of Chemically Modified Graphene Sheets", **APS**, Pittsburgh, PA, March 2009
119. Vikas Berry and Kabeer Jasuja, "Microwave induced in-situ deposition of Gold and Silver nanoparticles on chemically modified sheets of graphene: Avenue to build Graphene-metal interface", **APS**, Pittsburgh, PA, March 2009
120. Vikas Berry and Kabeer Jasuja, "Snow flake shaped gold nanostructures templated on graphene: an avenue to fabricate novel nano electronic devices", **APS**, Pittsburgh, PA, March 2009
121. Vikas Berry and Kabeer Jasuja, "'Spring-Like' and Photo-actuated Junctions Between Nanoparticles", **APS**, Pittsburgh, PA, March 2009
122. Vikas Berry and Nihar Mohanty, "Wrapping of a single bacterium with Functionalized - Chemically Modified Graphene (FCMG) sheets via highly specific protein-cell wall interaction", **APS**, Pittsburgh, PA, March 2009
123. Vikas Berry, Nihar Mohanty, Kabeer Jasuja, Ashvin Nagaraja and Jose Armesto, "Graphene Modification to produce novel structures and devices", **Center of Biobased Polymers by Design - KSU**, January 2009
124. Vikas Berry and Nihar Mohanty, "Attachment of Single Bacterium Cell, DNA and Single Molecules on Chemically Modified Graphene Sheets: Avenue to Build Smart Electrochemical Circuitry", **AICHE**, Philadelphia, PA, November 2008
125. Vikas Berry and Kabeer Jasuja, "'Spring-Like' and Photomechanical Junctions Between Nanoparticles: An Avenue to Power Molecular-Machines by Compression Energy", **AICHE**, Philadelphia, PA, November 2008
126. Vikas Berry and Kabeer Jasuja, "Spring-like molecular Junctions: An Avenue to Store Energy in Molecules to Power Molecular Machines", **Trends in Nanotechnology**, Oviedo, Spain, September 2008
127. **Invited Talk**, Vikas Berry, Nihar Mohanty and Kabeer Jasuja, "Attachment of Single Molecules and biological components on Modified Graphene Sheets and Study of its Electronic Properties: Building Highly Sensitive Biomolecular Devices", **Indian Institute of Science**, Bangalore, India, June 2008
128. Vikas Berry, Kabeer Jasuja, Nihar Mohanty, Arthur Thompson and Mark Battig, "Functionalized and Mechanical Molecular Junctions between Metal Nanoparticles", **Material Research Society**, San Francisco, CA, April 2008
129. Kabeer Jasuja and Vikas Berry, "Photo-induced Molecular Mechanics to Produce Reversible Mechanical Motion of Nanocomponents: Avenue to Build Nanomachines", **Biochemical Engineering Symposium**, Iowa State University, March 2008
130. Nihar Mohanty and Vikas Berry, "Biological Interfacing with Chemically Modified Graphene for Biosensing and Logic Devices", **Biochemical Engineering Symposium**, Iowa State University, March 2008

131. **Invited Talk**, Vikas Berry, "*Bionanotechnology and Cooperative Molecular Electronics*", **Condensed Matter Group**, Department of Physics, Kansas State University, September 2007
132. **Invited Talk**, Ravi Saraf, Vikas Berry, Sanjun Niu, Vivek Maheshwari, Jennifer Kane, "*Electronic Nanodevices on Biomolecules and Microorganism Scaffold*", **Material Research Society**, San Francisco, CA, April 2007
133. Vikas Berry, Ravi Saraf, "*Humidity sensor based on tunneling barrier width modulation*", **Heartland Biomedical Engineering Symposium**, Omaha, NE, April 2005
134. Vikas Berry, Ravi Saraf, "*Nanodevice piggyback on bacteria*", **American Physical Society** – March Conference, Los Angeles, CA, March 2005

ADMINISTRATION

DEPARTMENT HEAD: 8/2015 - Current

Short Statement on my Approach to Academic Administration

My administrative approach begins with a critical task of setting the priorities and building a clear strategic plan for the unit. I have responsibly performed this exercise by listening to all the constituencies to understand the strengths, recognize growth directions, and learn about the operation-bottlenecks. I align knowledge gained with my vision of growth, productivity, and excellence in education to identify the long-term and short-term goals to pursue. To achieve these goals, I start with clearly defining and communicating the goals to the upper-administration, faculty and staff. Then via an activity of open dialogue and incorporation of ideas from the constituencies, we build high-impact, long-lasting strategic plan with broad inclusivity. We then collaboratively develop detailed and implementable approaches with contingency-plan.

During my day-to-day activities, I am constantly focused on enabling and ensuring smooth operations of the department machinery to (a) deliver 'excellent' education to students, (b) perform ground-breaking research, (c) serve the community, (d) promote our affiliates and (e) keep our accounts balanced.

Administrative Accomplishments & Activities

- **Department Ranking:** Department rankings have improved from 74 (2017) to 61 (2018).
- **New Building:** Made a solid proposal (with space allocation analysis and student/faculty projections) with the dean of engineering to help secure **\$44M** from the Chancellor's office for a new ~50,000 sf building for the whole of Chemical Engineering with space for Mechanical and Civil engineering faculty. Led the design phase for the department offices, labs, and student areas. Building is expected to be ready by August 2019.
 - 60% additional research space for Chemical Engineering
 - Capacity to add five more faculty members to the department
 - **Process:** As a head and after several meetings, I recognized that one of the major challenges facing the department was its location (~1 mile away from the main campus) and shortage of laboratory space. I made a proposal to the dean and then to the chancellor, where I showcased the space-requirements related to the current and projected enrollments backed with a strong financial model. The space for Chemical Engineering was maximized via several negotiations, increasing the budget from \$35M to \$44M.
- **Faculty Hiring:** Increased the faculty size by **41.6%** from 12 to 17. Core faculty increased from 7 to 11 (57%).

- Faculty Hiring: Four eminent faculty members
 - One polymer expert with NSF-CAREER Award
 - Three *sought-after* candidates with multiple offers were hired as Assistant Professors
- **Enrollments:** Increased undergraduate enrollment by ~ 5-8% every year. Increased graduate enrollment from 70 to ~102 students in the last three years.
- **Research Expenditures:** Increased research expenditures by 55% last year. Increased # of proposals in two years = 93%. Increased research funding (in two years) = 146% (from \$1.3M to \$3.2M).
- **Operating Budget:** Managed an operating budget of \$3.2M for the department.
- **Endowed Professorship:** Worked with the Engineering Development office to secure a \$500K endowment for a Professorship in Chemical Engineering (Satish Saxena Professorship). Hiring has started.
- **Started 3+2 China Program:** Started a new China 3+2 Program in the department. Commencement year revenue was \$80K. This year ~ \$140K. Set to grow to \$750K in five years.
- **Started Graduate Acceleration Program (GAP):** Started GAP program for MS students with Shorelight Education. Built the complete curriculum for the program. Expected to help double the MS program.
- **MS Enrollments:** Increased MS enrollments by 41.9% with the help of a hard-working graduate committee. Increased total graduate enrollment from 70 to 102.
- **Teaching Assistants:** Studied the TA allocations and secured 77% more TA positions (9 to 16) for the department. This was critical to reduce the workload of the faculty.
- **Staff Hiring:** Hired three new staff members: Roberto Rodriguez (Business Manager), Sarai Chavez (Administrative Assistant), and Jan Sagun (Lab Manager). We have monthly meetings to make sure that the morale of the staff stays high and the team has a clear understanding of the department mission.
- **Infrastructure Improvement:**
 - Secured \$89,000 from college for improved teaching facility:
 - Wall-to-wall whiteboards
 - Electronic podiums added to all lecture rooms
 - Smart conference room
 - Secured \$12,000 to improve the departmental library.
 - Wireless monitor added in all offices for research discussion and showcasing.
 - Hallway wall-art created for all research groups.
 - Worked with lab manager to renovate unit operations laboratory
- **Department Promotion:**
 - Promotional Videos Created
 - Research Excellence: Youtube:
<https://www.youtube.com/watch?v=aMqqilgDJ64>

- Educational Excellence: Underway
<https://uicmanager.sharestream.net/ssdcms/i.do?u=c099faf93efc499>
 - Promotional Memorabilia were designed.
 - Renovated the current building's entrance with monitors and corridors with research art.
 - Started AIChE receptions
 - Organized Prof. Paul Weiss's reception at Berry Residence
- **Industrial and Alumni Engagement:**
 - Started Chem-E Forum to enable interaction between Alumni, Industry and current students
 - Industry Day
 - Alumni Day events were started in the department.
 - ChE bestowed its first Chemical Engineering Champion Award.
- **Mentoring Program:** Started a new Mentoring Program for junior faculty
 - Monthly lunch with successful faculty (invited from the Chicago area). Sangil Kim and Meenesh Singh have received their first NSF Awards.
 - Mentored Ying and Brian on NSF-ICORP. Ying received ICORP and Brian received POC.
 - Have started an internal NSF-CAREER Review Panel.
- **Department Operations:** Written new bylaws for the department with the advisory committee. Streamlined the operations in the department by starting a culture of Memos for clarity of procedures. Conducted regular staff meetings and worked with the auditors.
- **Collaborations for the Department:**
 - Started Chemical Engineering Research Symposium
 - Starting Research Panel Discussions
 - Started Ph.D. retreat with panel discussions on Academic Job Search
 - Built connections with the Argonne National Laboratory and the University of Chicago.
- **Other Activities:**
 - Added five adjunct faculty members.
 - Started Chem-E-Car program in UIC.
 - Nominated several faculty & staff members for awards.
 - Organized mentoring meeting for tenure-track faculty.
 - Worked closely with the directors of graduate and undergraduate studies to improve curriculum, recruitment, and retention.
 - Prepared tenure and mid-tenure packages.
 - Conducted faculty and staff evaluations.
 - Kept a close eye on student progress, faculty development, and staff morale.
 - Led ABET data collection and IBHE data collection; and visits for undergraduate and graduate accreditation.
 - Managed course syllabus and schedule.
 - Made policies for ordering process, grant proposal writing, use of department funds, seminars, amending information on the website.
 - Directed all department committees.
 - Worked with the external advisory board.
 - Managed the operating budget and expenses.
 - Organized faculty and staff meetings.

- Worked closely with the advisory committee on all department decisions.
- Worked with AIChE and ECS student organization on its activities and events.

SERVICE ACTIVITIES:

1. **Editorial Board Member of Nature's Scientific Reports** (<http://www.nature.com/srep/eap-ebm/index.html#chemistry>)
2. **Guest Editor for Journal of Nanomaterials and Molecular Nanotechnology**
3. **Served as a reviewer for several journals**
 - a. Science
 - b. Nature
 - c. Nature Nanotechnology
 - d. Nature Materials
 - e. Nature Communications
 - f. Scientific-Reports
 - g. Nature Protocols
 - h. Nano Letters
 - i. ACS-Nano
 - j. Angewandte Chemie
 - k. Journal of the American Chemical Society
 - l. Small
 - m. Advanced Materials
 - n. Nanoscale, Nanoresearch
 - o. IEEE-nano
 - p. The Analyst
 - q. Journal of Physical Chemistry
 - r. Chemistry of Materials
4. **Served as a reviewer for several grant-review panels and individual proposals:**
 - a. NSF (May 2017, Feb 2017, Dec 2014, Jan 2012, May 2011, Oct 2010, March 2010, Nov 2008, Nov 2007)
 - b. UIC: POC grants (Nov 2016), COE SEED (May 2016, 2015), Chancellor's Award (Nov 2015)
 - c. DoE (June 2013, Feb 2012)
 - d. NIH (June 2010, Nov 2009)
 - e. Wayne State University (March 2011): Reviewer for the *Research Enhancement Program in Physical Sciences* (1 proposal)
 - f. Netherlands Office of Science (Jul 2009): Reviewer for *Science for Global Development* program (1 proposal)
 - g. Czech Science Foundation (2017, 2014, 2013)
 - h. Ireland Science Office (March 2017)
5. **Conference Chair:**
 - a. International Symposium on Functional Materials, India (April 2018)
 - b. ICREA Workshop on Graphene Nanobiosensors – 2016
 - c. Recent Advances in Graphene and Related materials: Chair; 2010 (Singapore)
 - d. AIChE: Chair for "*Graphene and Carbon Nanotube Based Devices*", (Nov 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010, 2009)
 - e. AIChE: Chair for "*Integration of Biological Systems with Electronic and Photonics*", (Nov 2010, Nov 2011)

- f. APS: Chair for “*Graphene Structure: Local Probes*”, Mar 2010
- g. MRS: Chair 2017, 2012
- 6. **Scientific Board Member:**
 - *Journal of Nanoscience Letters*
 - *All Results Journal – Nano*
- 7. Serve in the Graduate Committee (20 students)
- 8. Member of Materials Research Society, American Chemical Society, American Institute of Chemical Engineers, and American Physical Society
- 9. University/College/Department:
 - a. Executive Committee Member, COE - UIC
 - b. Search Committee Member: Faculty, UIC.
 - c. Search Committee Member: Dean, College of Engineering (2013)
 - d. NSF-CAREER Workshop speaker (2012, 2013)
 - e. Search Committee Member: Assistant Professor (2014, 2012, 2011)
 - f. Tenure and Promotion Documentation Committee Member (2013)
 - g. Core Facilities Committee Member
 - h. PhD Qualification Process Committee member (2011)
 - i. Undergraduate Advisor.

RESEARCH NEWS FEATURED IN SCIENCE-NEWS PORTALS

VIDEOS/PODCASTS

1. **PODCAST IN MICROBE MAGAZINE (START AT 4:30):**
<http://www.microbeworld.org/podcasts/microbe-magazine-podcast/2193-how-bacteria-can-change-graphene-to-propel-rotors>
2. **FEATURED RESERARCH-EXCELLENCE VIDEO FOR THE STATE OF THE UNIVERSITY ADDRESS BY UNIVERSITY PRESIDENT:**
<http://youtu.be/YIJMVL5c74k>
3. **PHOTONIC MEDIA:** <http://www.youtube.com/watch?v=mIVLgfYJknE#t=2m37s>
4. **AMERICAN CHEMICAL SOCIETY:** <http://pubs.acs.org/page/jpclcd/berry-video.html>
5. **K-STATE FEATURE:**
<http://www.youtube.com/watch?v=7VzPkuvGln4&feature=edu&list=PLC476237DAF61390B>
6. **JOURNAL OF PHYSICAL CHEMISTRY:**
<http://www.slideshare.net/jpcoffice/hot-papersubmissionjpcclberry>

News about Our Work and Our Commentary

1. **YAHOO! 9 Amazing Uses for Graphene from Filtering Seawater to Smart Paint**
<https://finance.yahoo.com/news/9-amazing-uses-graphene-filtering-111535322.html>
2. **MEDICAL NEWS TODAY**
https://www.medicalnewstoday.com/articles/317002.php?utm_campaign=trueAnthem:+Trending+Content&utm_content=58f9a2b104d3016a07a4eff0&utm_medium=trueAnthem&utm_source=twitter
3. **MICROBE**
<https://vikasb.people.uic.edu/microbe.pdf>

Direct growth of hBN on silicon and silicon based substrates:

1. **NATURE INDIA:**
<http://www.natureasia.com/en/nindia/article/10.1038/nindia.2017.58>

Graphene-Phononics for Cancer Detection:

2. **AICHE:**
<https://www.aiche.org/chenected/2016/12/graphene-detects-brain-cancer-cells>
3. **THE ENGINEER:**
<https://www.theengineer.co.uk/graphene-used-to-identify-cancerous-cells/>
4. **DIGITAL TRENDS:**
<http://www.digitaltrends.com/cool-tech/graphene-detects-cancer-cells/>
5. **NEW ATLAS:**
<http://newatlas.com/graphene-cancer-detection/47044/>

Germs add ripples to make 'groovy' graphene:

1. **THE ECONOMIST:**
<http://www.economist.com/news/science-and-technology/21704743-bacteria-may-be-key-turning-graphene-semiconductor-bugs>
2. **PHYS-ORG:**
<http://phys.org/news/2016-07-germs-ripples-groovy-graphene.html>
3. **SCIENCE NEWSLINE, PHYSICS & CHEMISTRY:**
<http://www.sciencenewsline.com/news/2016071215310083.html>

Graphene-Quantum-Dot on Bacteria Electromechanical Device:

1. **WASHINGTON POST:**
<http://www.washingtonpost.com/news/morning-mix/wp/2015/04/09/those-nanobots-from-the-x-files-are-now-a-real-thing/?postshare=5231428576845674>
2. **WALL STREET JOURNAL:**
<http://www.wsj.com/articles/a-tiny-robot-senses-humidity-1427478730?tesla=y>
3. **SCIENCE DAILY**
4. **EE-TIMES**
5. **POPULAR SCIENCE**
6. **IEEE SPECTRUM**
7. **MOTHERBOARD**
8. **SCIENCE360**
9. **REDORBIT**
10. **NANOWERK**
11. **GIZMAG**
12. **THE ENGINEER**
13. **EXTREME TECH**
14. **R&D MAG**
15. **ESCIENCE NEWS**
16. **PHYS ORG**
17. **EUREKAALERT!**
18. **NANOTECHNOLOGY NOW**

Molybdenum Disulphide Coupled with Gold Nanoparticles to Enhance Gating Characteristics

19. **SCIENCE DAILY:**
<http://www.sciencedaily.com/releases/2013/09/130905112125.htm>
20. **IEEE SPECTRUM:**

- <http://spectrum.ieee.org/nanoclast/semiconductors/nanotechnology/gold-nanoparticles-make-molybdenum-disulfide-extra-special>
21. **KURZWEIL:** <http://www.kurzweilai.net/another-breakthrough-in-replacing-silicon-in-transistors>
 22. **SCIENCE WORLD REPORT:**
<http://www.scienceworldreport.com/articles/9387/20130910/advance-wonder-material-molybdenum-disulfide-brings-ultrathin-electronics-closer.htm>
 23. **EET-INDIA:**
http://www.eetindia.co.in/ART_8800689562_1800001_NT_418db36e.HTM?jumpto=view_welcomead_1379441588454
 24. **THE ENGINEER:** <http://www.theengineer.co.uk/channels/design-engineering/news/gold-standard-for-future-electronic-devices/1017061.article>

Graphene Quantum Dots Based Electron-Tunneling Sensors

1. **SCIENCE DAILY:**
<http://www.sciencedaily.com/releases/2013/05/130508131851.htm>
2. **PHYS-ORG:** <http://phys.org/news/2013-05-graphene-quantum-dots-humidity-pressure.html>
3. **e! SCIENCE NEWS:**
<http://esciencenews.com/articles/2013/05/08/researchers.use.graphene.quantum.dots.detect.humidity.and.pressure>
4. **ZEE-NEWS INDIA:** http://zeenews.india.com/news/space/improved-sensing-devices-may-someday-tell-if-it-will-rain-on-mars_848082.html
5. **NANO WERKS:**
http://www.nanowerk.com/news2/newsid=30411.php?utm_source=feedburner&utm_medium=twitter&utm_campaign=Feed%3A+nanowerk%2FagWB+%28Nanowerk+Nanotechnology+News%29

Graphene Quantum Dots and Nanoribbons Produced via Diamond Knife

1. **LASER FOCUS WORLD**
<http://www.laserfocusworld.com/news/2012/05/21/professor-uses-diamond-to-produce-graphene-quantum-dots-and-nano-ribbons-of-controlled-structure.html>
2. **AZO-NANO:** <http://www.azonano.com/news.aspx?newsID=24874>
3. **BIG NEXT FUTURE:** <http://nextbigfuture.com/2012/05/professor-uses-diamond-to-produce.html>
4. **THE ENGINEER:** <http://www.theengineer.co.uk/sectors/electronics/news/advance-in-graphene-quantum-dots-benefits-optoelectronics/1012647.article>
5. **FROGHEART:** <http://www.frogheart.ca/?p=6785>
6. **EE-TIMES:** http://www.eetindia.co.in/ART_8800667407_1800010_NT_b846de0d.HTM
7. **SCIENCE-DAILY:** <http://www.sciencedaily.com/releases/2012/05/120517193141.htm>
8. **NEW-ELECTRONICS:** <http://www.newelectronics.co.uk/electronics-news/us-researchers-make-graphene-breakthrough/42465/>

Bacterial Wrapping with Graphene

1. **NATURE MAGAZINE**
<http://www.nature.com/news/2010/100318/full/news.2010.134.html>
2. **CHEMICAL ENGINEERING PROGRESS:** <http://www.che.ksu.edu/~vberry/CEP-2011.pdf>
3. **MICROSCOPY TODAY:** <http://content.yudu.com/A1rzjk/MTO19Issue4/resources/10.htm>
4. **CHEMPHYSICHEM FEATURE ARTICLE:**
<http://onlinelibrary.wiley.com/doi/10.1002/cphc.201100255/abstract;jsessionid=4A95B19D64D07A205EAF9468BDA13120.d03t01>

5. **PHYSICS WORLD:** http://physicsworld.com/blog/2009/03/fancy_a_bacterium_wrap.html
6. **PHYSORG:** <http://www.physorg.com/news/2011-03-graphene-cloak-bacteria.html>
7. **COSMOS MAGAZINE:** <http://www.cosmosmagazine.com/news/4157/new-graphene-cloak-spy-bacteria>
8. **SCIENCE DAILY:** <http://www.sciencedaily.com/releases/2011/03/110315130043.htm>
9. **MEDICAL NEWS TODAY:** <http://www.medicalnewstoday.com/articles/219256.php>
10. <http://news.softpedia.com/news/Graphene-Shrouds-for-Bacteria-Created-137867.shtml>
11. <http://nextbigfuture.com/2011/03/graphene-cloak-protects-bacteria.html>
12. http://esciencenews.com/articles/2011/03/15/all_wrapped.k.state.researchers.graphene.cloak.protects_bacteria.leading.better.images
13. <http://www.nanowerk.com/news/newsid=20545.php>
14. http://www.microbeworld.org/index.php?option=com_jlibrary&view=article&id=6180
15. <http://www.azonano.com/news.asp?newsID=21940>
16. **PHOTONIC MEDIA (discussion starts at 2:37):** <http://www.che.ksu.edu/~vberry/News.html>

Berry's Commentary on the 2010 Nobel Prize in Physics was published in Wiley:

1. **WILEY:** [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1439-7641/homepage/news/14446.en.html](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1439-7641/homepage/news/14446.en.html)
2. **NANOTECHWIRE:** <http://mobile.nanotechwire.com/news.asp?nid=10846>

NSF-CAREER Award

1. **NEWSWISE:** <http://www.newswise.com/articles/groundbreaker-chemical-engineer-earns-national-science-foundation-career-award-for-work-with-graphene-quantum-dots>
2. **AZONANO:** <http://www.azonano.com/news.asp?newsID=21602>

Graphene based Biointerfaced devices

1. **SCIENCE DAILY:** <http://www.sciencedaily.com/releases/2009/04/090413141256.htm>
2. **PHYSORG:** <http://www.physorg.com/news158850916.html>
3. **SCIENCE CENTRIC**
<http://www.sciencecentric.com/news/article.php?q=09041318-k-state-engineers-create-dna-sensors-that-could-identify-cancer>
4. **NANOTECH-NOW**
http://www.nanotech-now.com/news.cgi?story_id=32890
5. **MEDICAL NEWS TODAY**
http://www.medicalnewstoday.com/sections/medical_devices/
6. <http://www.reuters.com/article/pressRelease/idUS114792+13-Apr-2009+PRN20090413>
7. <http://www.bio-medicine.org/medicine-news-1/K-State-engineers-create-DNA-sensors-that-could-identify-cancer-using-material-only-one-atom-thick-42325-1/>
8. http://www.labspaces.net/96954/DNA_sensor_that_can_identify_cancer_using_material_only_one_atom_thick
9. http://www.eurekalert.org/pub_releases/2009-04/ksu-kec041309.php
10. <http://esciencenews.com/articles/2009/04/13/k.state.engineers.create.dna.sensors.could.identify.cancer.using.material.only.one.atom.thick>
11. <http://www.scienceblog.com/cms/dna-sensors-could-identify-cancer-using-material-only-one-atom-thick-20218.html>
12. <http://www.nanowerk.com/news/newsid=10067.php>
13. <http://news.prnewswire.com/ViewContent.aspx?ACCT=109&STORY=/www/story/04-13->

- 2009/0005004962&EDATE=
14. <http://www.newswise.com/articles/view/551084/?sc=rssn>
 15. <http://www.azom.com/news.asp?newsID=16416>
 16. <http://teguh.staff.uns.ac.id/category/research/>
 17. <http://ca.sys-con.com/node/917513>
 18. http://insciences.org/article.php?article_id=4257
 19. <http://flashscience.net/2009/04/14/engineers-create-dna-sensors-that-could-identify-cancer-using-material-only-one-atom-thick/>
 20. <http://www.individual.com/story.php?story=99335492>
 21. http://www.examiner.com/p-327965-Connecting_Materials_Science_With_Biology_K_State_Engineers_Create_DNA_Sensors_That_Could_Identify_Cancer_Using_Material_Only_One_Atom_Thick.html
 22. <http://www.biowizard.com/news.php?id=3>
 23. http://www.medgadjet.com/archives/2009/04/graphene_thought_to_create_biological_microsensor.html
 24. http://www.firstscience.com/home/news/breaking-news-all-topics/k-state-engineers-create-dna-sensors-that-could-identify-cancer-using-material-only-one-atom-thick-page-2-1_61914.html
 25. <http://bx.businessweek.com/materials-science/connecting-materials-science-with-biology-k-state-engineers-create/11322962747977704081-e3ed9b5e9dc7ec48fd565ba7b15aa330/>
 26. http://www.forbes.com/feeds/prnewswire/2009/04/13/prnewswire200904131330PR_NEWS_USPR_DC97870.html
 27. <http://www.biosciencetechnology.com/ShowPR.aspx?PUBCODE=090&ACCT=9000000100&ISSUE=0904&RELTYPE=RLSN&PRODCODE=00000000&PRODLETT=J&CommonCount=0>
 28. <http://scintilla.nature.com/node/664963>

Graphene-Gold Interfacing

1. **CHEMICAL ENGINEERING NEWS:** <http://www.aiche.org/uploadedFiles/CEP/Issues/2009-11/110904.pdf>
2. **SCIENCE DAILY:** <http://www.sciencedaily.com/releases/2009/10/091013112521.htm>
3. **PHYSORG:** <http://www.physorg.com/news174590038.html>
4. **NANOTECH-NOW:** http://www.nanotech-now.com/news.cgi?story_id=34988
5. http://www.eetindia.co.in/login.do?fromWhere=/ART_8800588578_1800007_NT_08b2a1c6.HTM

Other Commentaries:

1. **(UIC) Science News: For Nobel Laureate's Work Published in Nature**
<https://www.sciencenews.org/article/%E2%80%98impermeable%E2%80%99-graphene-yields-protons>
2. **Chemical & Engineering News:**
<http://cen.acs.org/signin.html?resource=/content/cen/articles/90/web/2012/01/Unexpected-Glow>

From PhD Work

1. **NATURE MAGAZINE:** <http://www.nature.com/nature/journal/v437/n7063/full/4371210a.html>
2. **SCIENCE NEWS:**
http://www.sciencenews.org/view/generic/id/6707/title/Bionic_Bacteria_Gold_nanoparticles_make_gadgets_of_living_microbes
3. **DISCOVER MAGAZINE:** <http://discovermagazine.com/2006/feb/cyborg-bacteria>
4. **MSNBC:** <http://www.msnbc.msn.com/id/9841437/>

5. **ROYAL SOCIETY OF CHEMISTRY:**

<http://www.rsc.org/chemistryworld/News/2005/October/12100501.asp>

CURRENT GROUP-MEMBERS AND ALUMNI

Post-Doctoral Fellow

- | | | | |
|-------------------------|-------------------|---------------------|------|
| 1. Dr. T. S. Sreeprasad | Post-Doc, 2012-14 | Assistant Prof. | UTEP |
| 2. Dr. Sanjay Behura | Post-Doc, 2014-16 | Research Asst. Prof | UIC |
| 3. Dr. Vasanta Pallem | Post-Doc, 2013 | Deceased | |

Research Affiliates

- | | |
|----------------------|------------------------|
| 1. Dr. Sanjay Behura | Res. Asst. Prof, 2017- |
|----------------------|------------------------|

Graduate Students

- | | | | | |
|----------------------------------|-----|------|---------------------|---|
| 1. Kabeer Jasuja | PhD | 2011 | Assistant Professor | Indian Institute of Technology –
Ghandinagar |
| 2. Nihar Mohanty | PhD | 2011 | Process Engineer | Tokyo Electron |
| 3. Phong Nguyen | PhD | 2016 | Process Engineer | Air-Liquide |
| 4. Shikai Deng | PhD | 2017 | Post-Doc | Northwestern University |
| 5. Vedhikha Parthasarathy | MS | 2015 | | |
| 6. Kai-Chih Chang | MS | 2016 | | |
| 7. Xin Yu | MS | 2016 | Process Engineer | SMIC, China |
| 8. Songwei Che | | | PhD Candidate | |
| 9. Rousan Debbarma | | | PhD Candidate | |
| 10. Nicki Keisham | | | PhD Candidate | |
| 11. Deisy Arrington | | | PhD Candidate | |
| 12. Cheng Wang | | | PhD Candidate | |
| 13. Sheldon Cotts | | | PhD Candidate | |
| 14. Natechanok Yutthasaksunthorn | | | MS Candidate | |
| 15. Namrata Murti | | | MS – Short Project | |
| 16. Arjun Rangoonwala | | | MS – Short Project | |
| 17. Anmole Jhally | | | MS – Short Project | |
| 18. Suprith | | | MS – Short Project | |
| 19. Donovan Briggs | | | MS Incomplete | |

Undergraduate Students

20. Chris Mecinski
21. Ariane Gomes (Federal University of Ceará, Brazil)
22. Leonardo Marques (Brazil)
23. Alexander Crocker
24. Fayyazui Hassan
25. Craig Shaffer
26. Rosanna Granata
27. Jay Rawat
28. Roxanne Vitorillo
29. Fayyazul Hassan

- 30. Zamia Siddiqui
- 31. Ariane Gomes
- 32. Leo Anderson
- 33. Ahmed Alshogeathri
- 34. Luke Hibbeler
- 35. Fabian Martinez
- 36. Nolan McNeil
- 37. Monica Fahrenholz PhD Candidate Rice University
- 38. Mark Battig PhD Candidate University of Connecticut
- 39. Ashvin Nagaraja MS Candidate Texas A&M University
- 40. Steven Melton MS Candidate Kansas State University
- 41. Christina Davis PhD Candidate University of Nebraska
- 42. Joshua Linn Process Engineer
- 43. Jose Armesto Process Engineer
- 44. Arthur Thompson Process Engineer Sprint Inc
- 45. Kayum Ayinde
- 46. Nathan Lechtenberg
- 47. Jonggeun Sung
- 48. Cody Fager
- 49. Alfredo A. Rodriguez
- 50. Jonathan Colston
- 51. Augustus Graham
- 52. Evgeniy Shishkin,
- 53. Namhoon Kim
- 54. Nitya Jangam
- 55. Jenaë Tate