CURRICULUM VITAE

NARAYAN S. HOSMANE

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BUSINESS ADDRESS:
Dept. of Chemistry & Biochemistry
Northern Illinois University
DeKalb, Illinois 60115-2862
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PLACE OF BIRTH:
Gokarn, Southern India

CITIZENSHIP:
U.S.A.

EDUCATION

B.S. 1968 Karnatak University, Dharwar, India
Organic, Inorganic and Physical Chemistry

M.S. 1970 Karnatak University, Dharwar, India
Inorganic Chemistry

Ph.D. 1974 University of Edinburgh, Edinburgh, Scotland
Organometallic/Inorganic Chemistry

Ph.D. Thesis: *Some Reactions of Stannic Chloride with Silicon Hydrides and Some Novel Group IV Derivatives of Mercury.* E.A.V. Ebsworth as Research Advisor.

RECORD OF EMPLOYMENT

Postdoctoral Research Assistant, Queen's University of Belfast 1974-75. Full-time research under the supervision of Professor Frank Glockling in the areas of methylmercurials in relation to toxicology and environmental pollution.

Research Scientist, Catalysis Section, Lambeg Industrial Research Institute, Northern Ireland 1975-76. Supervised a group of chemists researching on odor and pollution control.

Research Associate, Auburn University, Auburn, Alabama 1976-77. Full-time research under the supervision of Professors Frederic A. Johnson and William E. Hill in the area of synthetic and kinetic studies of $B_{10}H_{10}^{-2}$ and C_2B_{10}-carboranes.

Research Associate, University of Virginia, Charlottesville, Virginia, 1977-79. Full-time research under the supervision of Professor Russell N. Grimes in the area of carboranes and metallacarboranes.

Assistant Professor, Virginia Polytechnic and State University, Blacksburg, Virginia, 1979-82.

Assistant Professor (tenure track), Southern Methodist University, 1982-1986.

Sabbatical Leave from SMU, Sept. 1985-Jan. 1986 (invited by Prof. Sheldon G. Shore), The Ohio State University, Columbus, Ohio.

Associate Professor (with tenure), 1986-1989 (Southern Methodist University).

Full Professor, August 1989-July 1998 (Southern Methodist University).

Full Professor (with tenure), August 1998-June 2001 (Northern Illinois University).

Presidential Research Professor, July 1, 2001-June 30, 2005 (Northern Illinois University).
Distinguished Research Professor, July 1, 2005-Present (Northern Illinois University).
Inaugural Board of Trustees Professor, July 1, 2008-Present (Northern Illinois University).
Distinguished Faculty of the CLA&S, August 2015 – Present (Northern Illinois University).

CONCURRENT POSITIONS HELD

Visiting Assistant Professorship, The Ohio State University, September 1985-January 1986.
Visiting Professorship, Wuhan University, Wuhan, PR China, November 16-29, 1987.
Vice President for Research, Boron Biologicals, Inc., April 1998-July 1998.
Distinguished Visiting Professorship, The Chinese University of Hong Kong, January 3-11, 2000.
Alexander von Humboldt Senior US Scientist, Universität Göttingen (Fall 2002).
Alexander von Humboldt Senior US Scientist, Universität Stuttgart (Summers 2003 and 2004).
Jawaharlal Nehru Distinguished Chair, University of Hyderabad, India (12/2003 - 02/2004).
Distinguished Institute Lectureship at Indian Institute of Technology-Bombay, India (2/2004).
Gauss-Professorship of the Göttingen Academy of Sciences, Germany (2005-2006).
Kilpatrick Lectureship, Illinois Institute of Technology, Chicago (December 2007).
Re-Invitation of Alexander von Humboldt Senior US Scientist, Universität Stuttgart (Summer 2008).
Distinguished Visiting Professorship, Korea University, Seoul, South Korea (2008).
Distinguished Visiting Professorship, Inst. of Chemical & Engineering Sciences, Singapore (2008)
Distinguished Visiting Professorship for International Senior Scientists from the Chinese Academy of Sciences (2012-Present)
Distinguished Consulting Research Professor at Mahatma Gandhi University, Kottayam, India (2012-Present)
High-End Foreign Expert of the State Administration of Foreign Experts Affairs (SAFEA), Ningbo, China (2013-Present)

TEACHING EXPERIENCE

Undergraduate Courses:
- General Chemistry Lectures & Labs (Va.Tech, SMU & NIU)
- Chemistry of Life (SMU)
- Survey of Organic Chemistry (Va.Tech)
- Organic Chemistry (Va.Tech)
- Introductory Chemistry for Liberal Arts Majors (SMU)
- Advanced Inorganic Chemistry (SMU)
- Inorganic Syntheses Lectures & Labs (SMU)
- Inorganic Chemistry-II Lectures and Labs (NIU)
- Seminars in Chemistry (NIU)

Graduate Courses:
- Chemistry of the Non-Metals (Va.Tech)
- Advanced Inorganic Chemistry (SMU)
- Organometallic Chemistry (NIU)
- Bonding in Boranes and Carboranes (SMU)

TECHNOLOGY DEVELOPMENT IN TEACHING AND LEARNING

Companion Website Authorship for the Honors' General Chemistry Textbook entitled "General Chemistry: Principles and Modern Applications", Eighth Edition by Petrucci, Harwood and Herring, published by Prentice-Hall, Inc., 2002 (Original Website: http://cwx.prenhall.com/petrucci/; Secondary URL: https://www.barnesandnoble.com/w/general-chemistry-ralph-petrucci/1119279853.

GRANTS FOR RESEARCH

Previous Grants

1983-1998 (**A**) ***Starter Grants*** from (1) **Southern Methodist University** *(Seed Grant, $5,000).* (2) **Research Corporation** *($9,600).* (3) **Petroleum Research Fund** *(Type G, $15,000).*

1983-1999 (**B**) *Internal Grants from* (1) **SMU Research and Travel Grant** *($10,883).* (2) **NIU Research and Artistry Grant** *($10,000).*

1985-2000 Main Group Metallacarboranes and Metallaboranes: Chemistry in New Directions: **National Science Foundation** *($959,298).*

1985-2001 Chemistry of *C*-Trimethylsilyl-Substituted C_2B_4- and C_4B_8-Carboranes: **The Robert A. Welch Foundation** *($456,000).*

1987-1998 Carboranes and Metallacarboranes of the C_2B_4-Cage Systems: **Petroleum Research Fund, Type B** *($85,000).*

1994-1996 Novel Catalysts in Ziegler-Natta Olefin Polymerization: **Texas Higher Education Coordinating Board (Advanced Technology Program)** *($215,000).*

1995-1998 Synthetic, Structural and Reactivity Studies of Carboranes and Metallacarboranes: **The Camille and Henry Dreyfus Foundation** *($60,000).*

1999-2000 A New $B_{22}H_{22}^{2-}$ for Neutron Capture and Diagnostics: **National Cancer Institute (NIH)**, *$100,000; ($30,000* subcontracted to NIU).

1999-2001 Metallacarboranes: Chemistry in New Directions: **Petroleum Research Fund, Type AC** *($60,000).*

1999-2001 Purchase of a Powder X-ray Diffractometer: **National Science Foundation**, *$60,770.*

2000-2003 Main Group Metallacarboranes and Metallaboranes: Chemistry in New Directions: **National Science Foundation** *($327,000).*

2001-2005 Presidential Research Professorship Funding to Support Scholarly Research: **Northern Illinois University, administered by the Graduate School**, $20,000.

2002-2004 Main Group Organometallic Chemistry of Group 13 Elements: Synthetic, Structural and Reactivity Studies: **Alexander von Humboldt Foundation**, Bonn, Germany. 75,000 Euros (US $99,000).

2002-2004 Purchase of a Liquid Chromatograph Ion-Trap Mass Spectrometer (Co-Principal Investigator): **National Science Foundation**, $116,224 ($36,224 NIU Cost Share).

2003-2006 Metallacarboranes of Main Group, Transition and Lanthanide Elements: Syntheses, Structures and Reactivities: **National Science Foundation** *($360,000).*

2006-2009 Metallacarboranes: Syntheses, Structures and Reactivities (Principal Investigator). April 1, 2006-September 30, 2009. **National Science Foundation**. $396,000.

2008-2009 Biological Applications of Boron Chemistry – Grant for Graduate Research Studies at Northern Illinois University (Principal Investigator). January 1, 2008 – January 31, 2009. **Applied Materials Systems Engineering, Inc. (AMSENG)**. $21,000.

2008-2009 Carborane and Metallacarborane-Appended Single-Wall Carbon Nanotubes and Fullerenes: An Exploratory Research Toward the Design of Spin- and Redox-Active Macromolecular Clusters (Principal Investigator). May 1, 2008 - July 31, 2009. **Alexander von Humboldt Foundation**. $23,000.

2008-2010 Grant for Consulting Boron Chemistry Applications to Semiconductor Instrumentations (Consultant/Principal Investigator). Beginning January 1, 2008. **AXCELIS Technologies, Inc.** $90,000.

2009-2010 Boron Drugs in Bladder/Prostate Cancer Treatment Research (Principal Investigator). May 18, 2009 – November 1, 2010. **Kishwaukee Community Hospital.** $110,000.

2009-2012 Upgrade of a 500 MHz NMR Console (Co-Principal Investigator): August 1, 2009 – July 31, 2012. **National Science Foundation**. $379,150.

2008-2013 Inaugural Board of Trustees Professorship Award (Principal Investigator). January 1, 2009 – December 31, 2013. **Northern Illinois University.** $50,000

2011-2013 Boronated 5-thio-D-glucose (5TDG) and Deoxyribose Conjugates: Novel Drugs for Treatment of Prostate/Bladder Cancer, Phase II (Principal Investigator with Dr. Barrie Bode). July 16, 2011 – July 15, 2013. **Kishwaukee Community Hospital.** $115,000.

2009-2013 Nano, Magnetic Nano, and Dendritic Structured Carboranes and Metallacarboranes: Syntheses, Structures and Reactivities (Principal Investigator). August 1, 2009 – July 31, 2013. **National Science Foundation.** $433,424.

2012-2014 Research Grant: Boron Nanostructures and Applied Materials System (Principal Investigator). April 2012 – June 2015. **AMSENG Research Grant.** $100,000.

2009-2015 (1) Advanced Durable Flexible Ultra Low Outgassing Thermal Control Coatings for NASA Science Missions and (2) The Conductive Thermal Control Material Systems for Space Applications (Co-PI/Sub-Contractee from AMSENG). January 1, 2009 – December 31, 2015. **NASA SBIR Grants (4).** $226,000.

2016-2018 Conductive Thermal Control Material Systems for Space Applications (Hosmane Consulting at NIU/Sub-Contractee from AMSENG). July 2016 – July 2018. **NASA SBIR PHASE-II Grant.** $118,340.

2016-2018 Synthesis of Highly Water-Reactive Boron Compounds (Principal Investigator). November 2016 – July 2018. **Tokyo Ohka Kogyo (TOK) Co. Ltd**., **Japan**. $164,809.

Current Active Grants

2021-2024 MRI: Acquisition of a 400 MHz NMR Spectrometer for Research and Education (Co-Principal Investigator): July 1, 2021 – June 30, 2024. **National Science Foundation**. $395,118.

Total Grant Amount Received from External Funding Agencies (1984-Present): >$6.9 MILLION

Total Grant Amount Received from Internal Councils of SMU and NIU: $105,883

PROFESSIONAL AFFILIATIONS

Fellow: Royal Society of Medicine (FRSM)
Royal Society of Chemistry (CChem, FRSC)
American Institute of Chemists (FAIC)
Alexander von Humboldt Foundation
Member: American Chemical Society
Society of Sigma Xi
International Council on Main Group Chemistry, Inc. (ICMGC)
Foreign Member: Russian Academy of Natural Sciences (RANS)

CURRENT RESEARCH INTERESTS

Synthesis and chemistry of cage compounds comprised of boron, carbon, transition, lanthanide and main group elements; examples include the carboranes and metallacarboranes containing $SiMe_3$ and/or bioactive moieties, and metal-metal bonds. Studies of molecular structure and physical properties are conducted utilizing X-ray crystallography, FT NMR, Mass, ESR, UV/Visible, and Mössbauer spectroscopy, electron diffraction, magnetic susceptibility, cyclic voltammetry, and other methods. The important aspects of our research are:

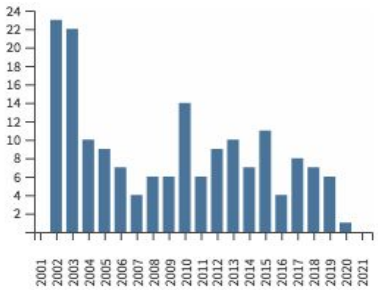
1. **CHEMISTRY OF BORON AND GADOLINIUM NANOSTRUCTURES IN CANCER TREATMENT:** To synthesize cage-functionalized carbon nanotubes and fullerenes to evaluate them as potential boron drug delivery agents in boron neutron capture therapy (BNCT) and also their gadolinium complexes as contrast agents in the treatment of brain tumors (GBM) and other forms of cancer. Preliminary biodistribution studies (*JACS*, **2005**, *127*, 9875-9880) showed that some of these derivatives concentrate preferentially in tumor cells and could prove to be useful additions to the group of tumor-targeting biomolecules, such as porphyrin substrates, epidermal growth factors, liposomes, etc., that have been investigated, with varying degree of success, as possible BNCT drug delivery agents.

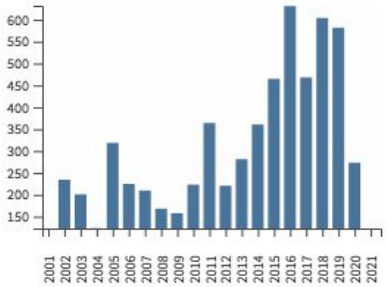
2. **ORGANOMETALLIC CHEMISTRY FOR INDUSTRIAL APPLICATIONS:** To construct, stepwise, a number of half- and full-sandwich metallacarborane species, and to evaluate their potential applications: (**i**) as catalysts for Ziegler-Natta olefin polymerization, (**ii**) in removal of selective radioactive metal ions from nuclear waste, (**iii**) as semiconductors or conductors, and also as precursors to conducting materials.

Ranked #5073 in Institute for Scientific Information (ISI)'s 10858 Most Cited Chemists from 1981-June 1997

Published Items in Each Year **Citations in Each Year**

NARAYAN S. HOSMANE





Results found: 395
Sum of the Times Cited: 9298
Average Citations: per Year = 184.06; per Item: 24.79
Author: Narayan Hosmane
h-index: 46; i10-index: 215

Ranked #48461 Among the Top 2% of 159684 Most Cited Scientists Worldwide by Stanford University's Research in 2020

Ranked #770 Among the Top 2% of 111388 Most Cited Organic/Organometallic Chemists Worldwide by Stanford University's Research in 2020 with the "C" Score of 3.744591386

SUPERVISION OF UNDERGRADUATE, GRADUATE AND POSTDOCTORAL RESEARCH

University of Virginia:	2 Undergraduates
Virginia Polytech. Inst. & State Univ:	2 Ph.D. (in part), 1 M.S., and 6 Undergraduates
Southern Methodist University:	24 Postdocs, 7 M.S., 1 Ph.D.(external), and 33 Undergraduates
Northern Illinois University	27 Postdocs, 18 Ph.D., 19 M.S. and 162 undergraduates

HONORS AND AWARDS

1. 2019-Honored with Sarvabhouma Award by Shri Samsthana Mahabaleshwara Deva, Gokarna.
2. 2018-Honored with the Dedicated Special Issue of Journal of Organometallic Chemistry.
3. 2017-Mahatma Gandhi Pravasi Samman Award, Global Indian Summit at House of Lords, London.
4. 2015-Distinguished Faculty Award from Northern Illinois University
5. 2013-Elected Foreign Member of the Russian Academy of Natural Sciences.
6. 2013-Elected Member of Zeta Gamma Chapter of Phi Beta Delta – Honor Society for International Scholars.
7. 2013-High-End Foreign Expert of the State Administration of Foreign Experts Affairs (SAFEA), China.
8. 2012-Distinguished Consulting Research Professor at Mahatma Gandhi University, Kottayam, India.
9. 2012-Visiting Professorship of the Chinese Academy of Sciences for International Senior Scientists.

10. 2009-2010 Inaugural Recipient of NIU Faculty Mentor Award, May 2010.
11. 2008 NIU Inaugural Board of Trustees Professorship Award (July 2008)
12. 2007 Lifetime Achievement Pravasi Award from NRI Institute, New Delhi, India (January 2008)
13. 2007 Re-Invitation of Humboldt Research Prize for Senior US Scientists from Alexander von Humboldt-Stiftung, Bonn, Germany
14. 2007 "Pride of India Gold Award" from NRI Institute, Washington, D.C. Chapter, USA
15. 2005 Gauss Professorship of the Göttingen Academy of Sciences, Germany.
16. 2003 Pandit Jawaharlal Nehru Distinguished Chair of Chemistry, University of Hyderabad, India.
17. 2001 Humboldt Research Award for Senior US Scientists from Alexander von Humboldt-Stiftung, Bonn, Germany.
18. 2001 Outstanding Grant Acquisition Award from Northern Illinois University, DeKalb, Illinois.
19. 2001 Presidential Research Professorship Award, for significant and sustained scholarly or creative work, including the achievement of national and international reputation in the chosen field of research, from Northern Illinois University, DeKalb, Illinois.
20. 1996 BUSA Award for Distinguished Achievements in Boron Science from the Awards Committee of Boron in the USA (BUSA) Workshop held in Guanajuato, Mexico.
21. 1994 India International Gold Award, India International Gold Medal & Mother India International Award for Outstanding Contribution to the Field of Education (Chemistry) from NRI Institute, New Delhi, India.
22. 1994 Camille and Henry Dreyfus Scholar/Fellow Award from The Camille and Henry Dreyfus Foundation, Inc, New York.
23. Certificate of Recognition and Listed in the 11th-19th editions of Marquis *Who's Who in the World*.
24. Certificate of Recognition and Listed in the 1st-8th editions of Marquis *Who's Who in Science and Engineering*.
25. 1987 Sigma Xi Outstanding Research Award from the Society of Sigma Xi, SMU Chapter.
26. Certificate of Merit, Bronze Plaque Award, and Listed in 13th edition of *Men of Achievement* by the International Biographical Center, Cambridge, England.
27. Certificate of Achievement in Science presented by the publisher and editors of American Men and Women of Science in 1986. Listed in 16th-22nd editions of *American Men and Women of Science*, edited by Jaques Cattell Press and published by R. R. Bowker Co., New York.
28. 1981 Teaching Excellence Award, by the Virginia Tech Academy of Teaching Excellence, and Co-recipient of the Sigma Xi President's and Visitors' Research Prize awarded by the Society of Sigma Xi, University of Virginia Chapter.

PEER REVIEWER FOR
Journals*:*

A. American Chemical Society (ACS)

Journal of the American Chemical Society
Organometallics
Inorganic Chemistry
Macromolecules
Chemical Reviews
Accounts of Chemical Research
The Journal of Physical Chemistry
The Journal of Organic Chemistry
Organic Letters
Crystal Growth and Design

Bioconjugate Chemistry
Biomacromolecules
ACS Chemical Neuroscience
ACS Medicinal Chemistry Letters
Journal of Agricultural and Food Chemistry
ACS Nano
ACS Macro Letters

B. Royal Society of Chemistry (RSC)
Chemical Communications
Dalton Transactions
CrystEngComm
Organic & Biomolecular Chemistry
Energy & Environmental Science
New Journal of Chemistry
RSC Advances
Chemical Science
Physical Chemistry Chemical Physics (PCCP)
MedChemComm

C. ChemPubSoc Europe (Wiley-VCH)
Chemische Berichte
Heteroatom Chemistry
Chemistry: An Asian Journal
ChemistryOPEN
ChemMedChem
Applied Organometallic Chemistry
Angewandte Chemie, International Edition in English
Chemistry: A European Journal
European Journal of Inorganic Chemistry
European Journal of Organic Chemistry
ChemPlusChem
Inorganic Syntheses
ZAAC - Zeitschrift für Anorganische und Allgemeine Chemie
Collection of Czechoslovak Chemical Communications (ChemPlusChem as of Jan. 2012)
ChemBioChem

D. Elsevier Publications (EES)
Arabian Journal of Chemistry
Bioelectrochemistry
Bioorganic Chemistry (Elsevier)
Bioorganic and Medicinal Chemistry (Elsevier)
Bioorganic and Medicinal Chemistry Letters
Coordination Chemistry Reviews
European Journal of Medicinal Chemistry (EJMECH)
Journal of Fluorine Chemistry
Inorganica Chimica Acta

Inorganic Chemistry Communications
Journal of Inorganic Biochemistry
Journal of Organometallic Chemistry
Nanomedicine: Nanotechnology, Biology, and Medicine (Elsevier)
Polyhedron
Radiation Measurements (Elsevier)
Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy
Sensors & Actuators: B. Chemical
Tetrahedron Symposia-in-Print
Tetrahedron
Tetrahedron Letters
Thin Solid Films
Biomaterials

E. Taylor & Francis Group Publishers (CRC Press)
Main Group Chemistry
Phosphorus, Sulfur, Silicon and Related Elements
Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry

F. Bentham Science Publishers
Recent Patents on Catalysis
Combinatorial Chemistry & High Throughput Screening
Anticancer Agents in Medicinal Chemistry
Current Organic Chemistry

G. Springer Publishers
Journal of Cluster Science
Structural Chemistry
Journal of Inorganic and Organometallic Polymers and Materials (JOIP)
Journal of Nanobiotechnology
Journal of Chemical Sciences
Journal of Materials Science

H. Thieme Publishers
SynLett

I. Hindawi Publishing Corporation
Bioinorganic Chemistry and Applications
BioMed Research International

J. MDPI - Open Access Publishing
Molecules
Molbank -Open Access Journal
Crystals-Open Access Journal

K. Walter De Gruyter Publishing
Main Group Metal Chemistry

Nanotechnology Reviews

L. NRC Research Press
The Canadian Journal of Chemistry

M. Integrated Science Publishing
Inorganic Letters

N. International Union of Pure and Applied Chemistry (IUPAC)
Pure and Applied Chemistry

O. Other Open-Access and Online Journals
Public Library of Science (PLOS ONE)
American Chemical Science Journal (SCIENCEDOMAIN International)
Journal of Alzheimer's Disease (IOS Press)
Journal of Visualized Experiments (JoVE)

Proposals:
National Science Foundation (Inorganic, Organic, and Materials Chemistry Divisions)
Petroleum Research Fund Administered by the American Chemical Society
National Research Council (U.S. Army Basic Research Committee)
National Cancer Institute (National Institute of Health-ZRG1-ONC)
National Institute of Health (Teleconference Special Emphasis RevPanel-ZRG1 ONC-P(02)-BNCT)
Research Corporation
National Research Council (Air Force Office of Scientific Research Committee)
North Atlantic Treaty Organization (NATO) (Scientific Affairs Division)
Research Grants Council (RGC) of Hong Kong
CONICYT- Ministerio de Educacion, Gobierno de Mexico-D.F., FONDECYT Program.
Grant Agency of Academy of Sciences, Czech republic
U.S. Civilian Research and Development Foundation's Cooperative Grants Program
Ohio Cancer Research Associates Grants program
U.S. Department of Energy (BES and NEER Programs)
Academia Europaea, Russia (Grant/Prize for Young Russian Scientists)
European Science Foundation (ESF)
Czech Science Foundation (GACR)
Qatar National Research Fund (QNRF)
International Union Against Cancer (UICC)
European Research Council (ERC) Executive Agency, Geneva, Switzerland
CUNY Collaborative Incentive Research Grant (CIRG) Program
Natural Sciences and Engineering Research Council (NSERC), Canada
US National Defense Science and Engineering Graduate (NDSEG) Fellowship
Greek Ministry of Education, Life Long Learning and Religious Affairs
King Fahd University of Petroleum & Minerals, Deanship of Research, Dhahran-Saudi Arabia
FCT – Portugese Foundation for Science & Technologies
CONICYT- Ministerio de Educacion, Gobierno de Chile, FONDECYT Program.
Elsevier Science & Technology Books Division, Waltham, MA, USA.
CRC Press/Taylor and Francis Chemistry and Life Sciences Books Division, San Diego, CA, USA

John Wiley & Sons, Chemistry/Biochemistry/Materials Sciences Books Division, Hoboken, NJ, USA

External Award, Prize, Tenure and/or Promotions:
1. New Mexico State University, Las Cruces, NM (Dr. William Quintana, 1996)
2. Syracuse University, Syracuse, NY (Assoc. Prof. James T. Spencer, 1997)
3. Miami University at Oxford, Ohio (Dr. Kent W. Piepgrass, 1998)
4. Southwest Texas State University, TX (Dr. Debra A. Feakes, 1999)
5. The Chinese University of Hong Kong, Shatin, NT, HK (Dr. Zuowei Xie, 2001)
6. Villanova University, Villanova, PA (Dr. Joseph Bausch, 2002)
7. McMaster University, Hamilton, ON, CANADA (Dr. John Valliant, 2004)
8. American University, Washington, D.C. (Dr. Kelley J. Donaghy, 2004)
9. Jordan Univ. of Science & Technology, Irbid, JORDAN (Assoc. Prof. Dr. Khalil Asali, 2004)
10. The City University of New York (CUNY), Staten Island, NY (Dr. Bhanu Chauhan, 2005)
11. The Chinese University of Hong Kong, Shatin, NT, HK (Assoc. Prof. Dennis K. P. Ng, 2005)
12. Saint Louis University, St. Louis, MO (Dr. Paul A. Jellis, 2005)
13. University of Missouri-Rolla, MO (Dr. V. Prakash Reddy, 2004, 2005)
14. The Ohio State University, Columbus, Ohio (Dr. Werner Tjarks, 2006)
15. Illinois Wesleyan University, Bloomington, Illinois (Assoc. Prof. Ram Mohan, 2006)
16. Illinois State University, Normal, Illinois (Dr. Craig C. McLauchlan, 2007)
17. University of Minnesota-Duluth, Minnesota (Dr. Venkatram Mereddy, 2007)
18. College of Staten Island, City University of New York (Dr. Krishnaswami Raja, 2009)
19. University of Bahrain, Isa Town, Kingdom of Bahrain (Dr. Abdul Ameer Ahmed Al-Laith, 2010)
20. Missouri University of Science & Technology, Rolla, MO (Assoc. Prof. V. Prakash Reddy, 2010)
21. Texas State University, San Marcos, TX (Assoc. Prof. Debra A. Feakes, 2012)
22. Queensborough Community College of CUNY (Associate Prof. Moni Chauhan, 2012 & 2014)
23. Missouri University of Science & Technology, Rolla, MO (Assoc. Prof. V. Prakash Reddy, 2014)
24. CSIR Committee for Bhatnagar (SSB) Prize for Scientists, New Delhi (Dr. N. R. Singh, 2024)
25. Sultan Qaboos University (SQU), Muscat, Oman (Associate Professor Musa Shongwe, 2014)
26. Univ. Grants Commission (UGC) Faculty Review Board, New Delhi (Dr. Barada Dash, 2014)

Publishers:
Times Mirror/Mosby
John Wiley & Sons, Inc.
Wm. C. Brown Publishers
Prentice-Hall (Simon & Schuster), College Division
Prentice-Hall (Pearson Education), College Division
McGraw-Hill Scientific Publishers
W. H. Freeman & Co.

EDITOR-in-CHIEF FOR
Annals of Advances in Chemistry (2018-Present)
Biochemical and Biomedicinal Journal of Cancer Research (BBJCR)(2012-Present)

NORTH AMERICAN EDITOR FOR
Molecules (1999 - 2015)
Applied Organometallic Chemistry (AOC) (2003 - 2009)

Main Group Metal Chemistry (1996 - 2004)

ACADEMIC EDITOR/MEMBER OF EDITORIAL/ADVISORY BOARD FOR

Russian Chemical Bulletin (2019-Present)
Heighpubs Journal of Chemistry (2016-Present)
Source Journal of Nanoscience and Nanotechnology (SJNN)(2016-Present)
American Chemical Science Journal (ScienceDomain International) (2013 – Present)
World Journal of Methodology (Baishideng Publishing) (2013 - Present)
International Journal of Bioorganic Chemistry & Molecular Biology (SciDoc Publ.) (2013-Present)
JSM Chemistry (JSciMed Central) (2013-Present)
American Journal of Materials Science and Technology (Columbia International Publishing) (2013-Present)
ChemistryOPEN (Wiley-VCH/ChemPubSoc Europe) (2011 - Present)
Organometallics (ACS Journal) (2006 - 2009)
Applied Organometallic Chemistry (AOC) (2009 - Present)
Main Group Chemistry (Taylor & Francis) (2006 - Present)
Main Group Metal Chemistry (MGMC) (1996 - 2012)
Main Group Chemistry News (MGCN) (1994 - 1999)

GUEST EDITOR FOR

- Special Issue of the *Journal of Organometallic Chemistry* commemorating 80th birthday of Professor Russell N. Grimes entitled "Organometallic Chemistry of Polyhedral Boranes and Carboranes: Synthesis, Theory, and Applications", published by Elsevier Science, in December 2015.
- Special Issue of the *Journal of Organometallic Chemistry* commemorating 75th birthday of Professor Vladimir I. Bregadze entitled "Organometallic Chemistry of the Main Group Elements", published by Elsevier Science, in December 2013.
- Special Issue of *Main Group Chemistry* in conjunction with the Symposium entitled "Polyfunctional Organoboranes - From Molecules to Materials" organized by Frieder Jaekle and François P. Gabbaï held at 232nd ACS National Meeting, San Francisco, September 10-14, 2006, published by Taylor & Francis, 2007.
- Special Issue of the *Applied Organometallic Chemistry-Main Group Metal Compounds* commemorating 65th birthday of Professor Thomas P. Fehlner entitled "Recent Advances in Inorganometallic Chemistry", published by Wiley-VCH, in April/May 2003.
- Special Issue of the *Journal of Organometallic Chemistry* commemorating 70th birthday of Professor Sheldon G. Shore entitled "From Borane Cages to Metal Clusters: Recent Developments", published by Elsevier Science, in November 2000.
- Special Issue of *Phosphorus, Sulfur, and Silicon (Volume 87, Numbers 1-4,* **1994***)* Entitled "Symposium on Recent Advances in the Chemistry of the Main-Group Elements,"Austin, Texas, October 24-27, 1993, published by Gordon and Breach.

PROFESSIONAL ADVISING/CONSULTING SERVICE

- Michael P. Carnes, Law Firm, Dallas, 1984-85
- JOKARI/US, Inc., Dallas, 1989-90
- Vertically Integrated Technology (VERITECH), Inc., Dallas, 1991-98

- Boron Technologies, 1999-Present
- Biosis, Inc., Solebury, PA.
- Jacobs Engineering Group Inc., Pasadena, CA.
- Advanced Technology and Materials (ATMI), Danbury, CT.
- Axcelis Technologies, Inc., Boston, MA
- Applied Materials Sciences and Engineering (AMSENG), Chicago, IL
- Agiltron, Inc., Woburn, MA.
- SB Boron Corp. Bellwood, IL
- TAE Life Sciences, Foothill Ranch, CA
- Jonquil Consulting Inc., Tokyo, Japan

MEMBER OF BOARD OF EXAMINERS AT

- Indian Institute of Technology (IIT) Bombay, India
- Chinese University of Hong Kong, Hong Kong
- Indian Institute of Science (IISc), Bangalore, India
- Annamalai University, Tamil Nadu, India
- National Chemical Laboratory Pune (University of Pune), India
- University of Hyderabad, India
- McMaster University School of Graduate Studies, Hamilton, Ontario, Canada
- Bharathiar University, Coimbatore, India
- Sri Venkateswara University, Tirupati, India.
- Karnatak University, Dharwar, India
- Sri Krishnadevaraya University, India
- Escola de Doctorat i de Formacio Continuada at Universitat Autonoma de Barcelona, Spain
- National Institute of Technology, Warangal, Andhra Pradesh, India

SERVICE TO SOUTHERN METHODIST UNIVERSITY.

A. ***SERVICE TO UNIVERSITY (1982-1998)***

Faculty Council, Dedman College, 1991-93
Dean's Advisory Comm. on Promotion & Tenure, Dedman College, 1986-88, 1990-91
Graduate Council, Dedman College, 1987-1990
Research Council, Office of the Provost, 1987-1989
Ethics and Tenure Committee of the Faculty Senate, 1988-90
International Office Advisory Committee, 1989-1998
Sigma Xi Research Awards Committee, 1988-90
Faculty Senate, SMU, 1989-92
President of the Society of Sigma Xi, SMU Chapter, 1989-91
Committee on Research Policy, Office of the Graduate Dean, SMU, 1989-92
Task Force for Center for Global Studies, Office of the Provost, SMU, 1990
Committee on Committees of the Faculty Senate, SMU, 1990-92
Health Professions Recommendation (Premed) Committee, Dedman College, SMU, 1991
Faculty Senate Subcommittee on Libraries, 1993-95

B. ***SERVICE TO CHEMISTRY AND BIOLOGY DEPARTMENTS (1982-1998)***

Seminar Coordinator, 1992-1996
Committees for Promotion, Tenure, Contract Renewals, and Recruitment of New Faculty
Faculty-in-charge for X-ray Laboratory
Faculty-in-charge for ACS Graduate & Undergraduate Research Directories
Committee for Ph.D. Degree Thesis Defense in Biological Sciences
Committee for M.S. Degree Thesis Defense in Chemistry

SERVICE TO NORTHERN ILLINOIS UNIVERSITY

A. *SERVICE TO UNIVERSITY*

Doctoral Dissertation Completion Awards Committee, Office of Vice Provost and Dean of Graduate Studies, 2001.
College Council, Office of the Dean of the College of Liberal Arts & Sciences, 2001-2003.
Search Committee for Vice Provost for Research and Dean of the Graduate School, 2001-2002.
Selection Committee for Presidential Research Professorship, 2004-Present.
Strategic Planning Task Force, Office of the Provost, November 2006-Present
Selection Committee for NIU/ANL Distinguished Graduate Fellowship in NanoScience and Engineering, 2005-Present
Vice President for Research and Dean of Graduate Studies *ad hoc* committe for the selection of Research Faculty, 2007-Present.
Dean's Designee for Doctoral Dissertation Defense, Office of the Vice President for research and Dean of Graduate School, 2006-Present.
Committee for Northern Illinois Proton Treatment and Research Center (NIPTRC), 2009-Present.
Search Committee for Vice President for Research and Graduate Studies, 2009-Present.
Search Committee for Director of Institute for Nano Science Engineering, and Technology (InSET) jointly with NIU and Argonne National Laboratory (ANL), 2009-Present.
Selection Committee for Board of Trustees Professorship, Office of the Provost, 2010-2011.
Vision 2020 Faculty Work, Excellence and Rewards Committee, Office of the President, 2011 - Present.
Research, Instruction and Public Service (RIPS) Advisory Council, Office of Vice President for Research, 2010 - Present.
Center for Biochemical and Biophysical Studies (CBBS) Planning Committee, 2011-Present.
Mace Bearer for the Office of the President at the NIU Undergraduate Commencement Day, May 11, 2019.

B. DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY (AUGUST 1998-PRESENT)

Curriculum Committee
Graduate Student Recruitment/Admissions Committee
Library Committee
Colloquium Committee
Executive Committee
Tenure and Promotion Committee
Space and Facilities Committee
Safety and Security Committee
Graduate Program Committee

SERVICE TO NATIONAL AND INTERNATIONAL SCIENTIFIC ORGANIZATIONS

- Secretary, XI International Conference on the Coordination and Organometallic Chemistry of Germanium, Tin and Lead, June 27-July 2, 2004.
- Panelist for National Science Foundation Graduate Research Fellowship Program, 2001-2003.
- Chairman of the National Organizing Committee for Biennial "Boron in The Americas" (BORAM) Conferences to be held at different locations in the North American Continent.
- Member of the National Organizing Committee for Biennial Boron USA (**BUSA**) Conferences to be held at different locations in the North American Continent.
- Discussion Leader of respective Sessions at the 1996 and 2001 Gordon Research Conferences on Organometallic Chemistry and Inorganic Chemistry held at Salve Regina University, Newport, RI, from June 30-July 5, 1996 and July 15-20, 2001.
- Panelist for National Cancer Institute (NIH) RFA Proposals for BNCT Program, 1996-Present.
- Treasurer of Fifth Boron USA Workshop (**BUSA-V-MEX**) held at Guanajuato, Mexico, from May 22-25, 1996.
- Organizer of International Symposium on "Recent Advances in the Chemistry of the Main Group Elements" at the 49th Southwest Regional Meeting of the American Chemical Society held at Austin, Texas, October 24-27, 1993.
- Chairman of the Local Organizing Committee for the First Boron USA (**BUSA-1**) Workshop held at Southern Methodist University and Colony Parke Hotel in Dallas, Texas, April, 1988.
- Session Chairman at the National Meetings of the American Chemical Society, the National and International Meetings on Boron Chemistry (**BUSA and IMEBORON**), and the International Conferences on Main Group Chemistry (**ANAIC**) since 1985.
- Advisory Board for International Conferences on Materials for the Millenium (MATCON)
- Advisory Board Member for BIT's 1st World Congress of NanoMedicine 2010, PRC.

INVITED SPEAKER (1983-)

1. Texas Christian University, Fort Worth, Texas, September 27, 1983
2. Bishop College, Dallas, Texas, October 17, 1983
3. Bishop College, Dallas, Texas, October 8, 1984
4. Student-Affiliate ACS, University of Texas at Arlington, Texas, January 25, 1985
5. Texas Woman's University, Denton, Texas, February 22, 1985
6. North Texas State University, Denton, Texas, March 14, 1985
7. The Ohio State University, Columbus, Ohio, October 3, 1985
8. 2nd Southwest Organomet. Chemistry Workshop, Univ. of Oklahoma, May 30-June 1, 1986
9. Wuhan University, The People's Republic of China, November 16-November 29, 1987
10. University of Southern California, Los Angeles, California, May 3 and September 13, 1988
11. University of California at Los Angeles, California, May 4, 1988
12. 4th J. J. Zuckerman Organometallic Chem. Workshop, Univ. of Oklahoma, May 27-29, 1988

13. Award Symposium, 3rd Chemical Congress of North America, Toronto, Canada, June 6, 1988
14. University of Texas at El Paso, El Paso, Texas, October 7, 1988
15. University of Texas at Arlington, Arlington, Texas, October 6, 1989
16. IMEBORON VII, Nicolaus Copernicus University, Torun, Poland, August 2, 1990
17. 6th J. J. Zuckerman Organomet. Chemistry Workshop, Univ. of Oklahoma, May 24-26, 1991
18. Royal Soc. of Chem. Main-Group Symp., UMIST, Manchester, England, April 13-16, 1992
19. National Chemical Laboratory, Synthetic Organic Chem. Division, Pune, India, April 21, 1992
20. Alchemie Research Centre (ICI), Thane, Bombay, India, December 7, 1992
21. Bhabha Atomic Research Centre (BARC), Trombay, Bombay, India, December 8, 1992
22. Indian Institute of Chemical Technology (IICT), Hyderabad, India, December 15, 1992
23. Indian Institute of Science (IISc), Bangalore, India, December 18, 1992
24. IV Congreso Iberoamericano de Química Inorgánica, Guanajuato, Mexico, May 18-21, 1993
25. University of North Texas, Denton, Texas, September 10, 1993
26. University of Houston, Houston, Texas, September 27, 1993
27. University of Missouri, St. Louis, Missouri, October 20, 1993
28. Ohio State University, Columbus, Ohio, October 21, 1993
29. University of Notre Dame, Notre Dame, Indiana, October 22, 1993
30. 2nd ANAIC International Conference, Kuala Lumpur, Malaysia, November 8-11, 1993
31. Kansai University, Faculty of Engineering, Suita City, Osaka, Japan, November 15, 1993
32. Osaka University, Dept. of Applied Chemistry, Suita, Osaka, Japan, November 16, 1993
33. Kinki University, Dept. of Chemistry, Higashi-Osaka, Osaka, Japan, November 16, 1993
34. 12th ICC Conference, Kakatiya University, Warangal, India, December 28-30, 1993
35. University of Roorkee, Roorkee, Uttar Pradesh, India, January 4-5, 1994
36. Baylor University, Waco, Texas, February 18, 1994
37. 10th International Conference on Organic Synthesis, Bangalore, India, December 11-16, 1994
38. Golden Jubilee Symposium, IICT-Hyderabad, India, December 19-20, 1994
39. Anorganisch-Chemisches Kolloquium, Universität Göttingen, May 15, 1995
40. Anorganisch-Chemisches Kolloquium, Universität Bielefeld, May 16, 1995
41. Chemisches Kolloquium, Techn. Hochschule Inst. für Anorg. Chemie, Aachen, May 17, 1995
42. Max-Planck-Institut für Festkörperforschung und Universität Stuttgart, May 19, 1995
43. Kolloquium der Fakultät für Chemie, Universität Heidelberg, May 22, 1995
44. Anorganisch-Chemisches Kolloquium, Universität München, May 23, 1995
45. Symposium in Honor of Sheldon Shore, 210th ACS Natl. Meeting, Chicago, August 23, 1995
46. University of Texas at Austin, Austin, Texas, October 11, 1995
47. University of Utah, Salt Lake City, Utah, October 31, 1995
48. Utah State University, Logan, Utah, November 1, 1995
49. Symposium in Honor of Robert Williams, Loker Hydrocarbon Res. Inst., USC, Dec 14, 1995
50. Centro de Investigacion y de Estudios Avanzados del IPN, Dept. of Chemistry, May 28, 1996
51. 1996 Gordon Research Conference on Organomet. Chem., Newport, RI, June 30-July 5, 1996

52. Anorganisch-Chemisches Kolloquium, Universität Stuttgart, July 10, 1996
53. IMEBORON IX, University of Heidelberg, Germany, July 14-19, 1996
54. VI Congreso Iberoamericano de Química Inorgánica, Puebla, Mexico, April 20-25, 1997
55. 8th Interntl. Symposium on Inorg. Ring Systems, Loughborough, U.K. August 10-15, 1997
56. Northern Illinois University, DeKalb, Illinois, March 25, 1998
57. North Dakota State University, Fargo, North Dakota, April 28, 1998
58. IMEBORON X, University of Durham, England, July 11-15, 1999
59. Symp. Org. & Inorg. Synth.via Boranes, 218th ACS Natl Mtg, New Orleans, Aug. 22-26, 1999
60. University of Missouri-St. Louis, St. Louis, Missouri, September 13, 1999
61. Indian Institute of Science, Bangalore, India, December 23, 1999
62. National Chemical Laboratory, Pune, India, December 28, 1999
63. The Chinese University of Hong Kong, Shatin, Hong Kong, December 31-January 11, 2000
64. Shanghai Institute of Organic Chemistry, Shanghai, China, January 12-14, 2000
65. University of Notre Dame, Notre Dame, Indiana, April 7, 2000.
66. Anorganisch-Chemisches Kolloquium, Universität Göttingen, May 22, 2000
67. Chemisches Kolloquium, Otto-von-Guericke-Universität Magdeburg, May 23, 2000
68. Anorganisch-Chemisches Kolloquium der drei Berliner Universitäten, May 24, 2000
69. Anorganisch und Physikalisch Chemisches Kolloquium, Universität Bremen, May 25, 2000
70. Anorganisch-Chemisches Kolloquium, Universität zu Köln, May 29, 2000
71. Kolloquium der Fakultät für Chemie, Universität Heidelberg, May 30, 2000
72. Anorganisch-Chemisches Kolloquium, Universität München, May 31, 2000
73. Organisch und Anorganisch-Chemisches Kolloquium, Universität Erlangen, June 5, 2000
74. Gemeinsames Kolloquium des Instituts für Anorganische Chemie, Universität Hohenheim, des Max-Planck-Instituts für Festkörperforschung an der Universität Stuttgart, June 6, 2000
75. Clarke College, Dubuque, Iowa, October 16, 2000
76. Johnson Matthey, West Deptford, New Jersey, October 23, 2000
77. Western Illinois University, Macomb, Illinois, October 27, 2000
78. The Ohio State University, Columbus, Ohio, April 11, 2001
79. Lab. de Chimie du Solide et Inorg. Moléculaire, CNRS-Université de Rennes, July 5, 2001
80. Xth Internatl. Conf. on Coord. & Orgmet. Chem. of Ge, Sn & Pb, Bordeaux, July 8-12, 2001
81. 2001 Gordon Research Conference on Inorganic Chemistry, Newport, RI, July 15-20, 2001
82. South Jersey Section-American Chemical Society, Cologne, New Jersey, October 16, 2001
83. The University of Wisconsin-Platteville, Platteville, WI, November 2, 2001
84. Loras College, Dubuque, Iowa, December 5, 2001
85. 2002 BNCT Conference at Kyoto Univ. Research Reactor Institute, Japan, Feb. 19-20, 2002
86. Illinois Wesleyan University, Bloomington-Normal, Illinois, March 1, 2002
87. University of Pennsylvania, Philadelphia, Pennsylvania, March 19, 2002
88. Villanova University, Villanova, Pennsylvania, March 20, 2002
89. Prof. Dr. Walter Siebert's 65th Birthday Symposium, Universität Heidelberg, April 19, 2002

90. University of Missouri-Rolla, MO, May 2, 2002
91. IMEBORON-XI, Moscow, Russia, July 28-August 2, 2002
92. Symposium in Honor of Tom Fehlner, 224th ACS Natl. Meeting, Boston, August 21, 2002
93. First Boron Symposium, Dumlupinar University, Kütahya, Turkey, October 3-4, 2002
94. Institut de Ciencia de Materials, Campus U.A.B., Barcelona, Spain, November 11, 2002
95. Max-Planck Inst/Inst. für Anorg. Chemie der Universität Stuttgart, December 9, 2002
96. Augustana College, Rock Island, Illinois, February 04, 2003
97. Olivet Nazarene University, Bourbonnais, Illinois, February 24, 2003
98. ACS-Students Affiliate, DePaul University, Chicago, Illinois, February 28, 2003
99. 31st Symp. for Research Awardees of Alexander von Humboldt-Stiftung, March 20-23, 2003
100. 7th Internatl. Symposium on Applied Bioinorg. Chem., Guanajuato, Mexico, April 1-5, 2003
101. Illinois Institute of Technology, Chicago, Illinois, April 30, 2003
102. Institut für Anorganische Chemie der Universität Stuttgart, June 6, 2003
103. Institut für Anorganische Chemie der Universität Stuttgart, June 10, 2003
104. Institute of Inorganic Chem., Academy of Sciences of the Czech Republic, July 14-17, 2003
105. University of Wisconsin-Madison, Madison, WI, September 22, 2003
106. Modern Trends in Inorganic Chemistry (MTIC-X), IIT-Bombay, Dec. 15-17, 2003
107. Indian Institute of Science, Bangalore, December 19, 2003
108. Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, December 22, 2003
109. Jawaharlal Nehru Distinguished Chair of Chemistry, Univ. of Hyderabad, Dec. 29, 2003
110. Graduate Colloquium, University of Hyderabad, January 23, 2004
111. Special Lecture at Indian Institute of Technology (IIT)-Madras, January 27, 2004
112. School of Life Sciences Public Lecture at University of Hyderabad, January 29, 2004
113. Institute Colloquium, Indian Institute of Technology (IIT)-Powai, February 4, 2004
114. Symposium in Honor of Alan Cowley, 227th ACS Natl. Mtg, Anaheim, March 30, 2004
115. DFG Symposium-Main Group Elements, Bavarian Academy of Sci. , Munich, April 19, 2004
116. Russian Academy of Sciences, INEOS, Moscow, May 30-June 4, 2004
117. Institut für Anorganische Chemie der Universität Würzburg, June 9, 2004
118. Institut für Anorganische Chemie der Universität Tübingen, June 14, 2004
119. Institut für Anorganische Chemie der Universität and Max-Planck, Stuttgart June 17, 2004
120. Graduiertenkolleg Magnetische Resonanz der Universität Stuttgart, July 19, 2004
121. Harvard/MIT Inorganic Chemistry Seminar Series, Cambridge, MA, Sept. 15-16, 2004
122. Elmhurst College, Chicago, Illinois, April 6, 2005
123. Eleventh Asian Chemical Congress (ACC-11), Seoul, Korea, August 23-27, 2005
124. IMEBORON-XII, Tohoku University, Sendai, Japan, September 11-15, 2005
125. University of Wisconsin-Parkside, October 7, 2005
126. The Shore Diamond Jubilee Symp., The Ohio State Univ., Columbus, OH, October 8-9, 2005
127. Saint Louis University, St. Louis, Missouri, December 2, 2005
128. "Polyfunctional Organoboranes" Symp. at 232nd ACS Meeting, San Francisco, Sept. 12, 2006

129. "MATCON-2007", Cochin Univ. of Science & Technology, Cochin, India, March 1-5, 2007
130. Royal Society of Chemistry Lecture, Indian Institute of Science, Bangalore, March 12, 2007
131. Centro de Investigacion y de Estudios Avanzados del IPN (CINVESTAV), Nov. 30, 2007
132. Kilpatrick Lecture, Illinois Institute of Technology, Chicago, Illinois, December 7, 2007
133. Korea Institute of Science and Technology, Chemistry Department, Seoul, March 10, 2008
134. SK Energy R&D Center, Daejeon, South Korea, March 11, 2008
135. Wonik Materials, Seocho-gu, South Korea, March 11, 2008
136. Chosun University, Gwangju, South Korea, March 13, 2008
137. Korea University Chemistry Department, Chochiwon, Korea, March 12 & 14, 2008
138. Institute of Chemical and Engineering Sciences, Singapore, March 19, 2008
139. National University of Singapore (NUS), Singapore, March 20, 2008
140. Graz University of Technology, Graz, Austria, July 1, 2008
141. Kishwaukee Community Hospital, DeKalb, Illinois, August 12, 2008
142. Symposium: Hybrid Nanomaterials, 236th ACS National Mtg. Philadelphia, Aug. 17-21, 2008
143. IMEBORON-XIII, Platja d'Aro, Spain, September 21-25, 2008
144. Northern Illinois University Nursing School, October 1, 2008
145. University of Minnesota-Duluth, Duluth, Minnesota, October 3, 2008
146. 3rd International Workshop: "Recent Advance in Chemistry", Colima, Mexico, Oct 8-10, 2008
147. Lifelong Learning Institute, Northern Illinois University, February 4, 2009
148. Center for Biochemical and Biophysical Studies (CBBS), February 6, 2009
149. Symp. Honoring Cowley, 237th ACS National Meeting, Salt Lake City, March 22-26, 2009
150. Institut für Anorganische Chemie der Johannes-Gutenberg-Universität , Mainz, May 26, 2009
151. Institut für Anorganische Chemie der Goethe Universität Frankfurt, May 27, 2009
152. Institut für Anorganische Chemie der Universität Karlsruhe, May 29, 2009
153. Institute European de Chimie et Biologie of Univ. Bordeaux I- ISM-IECB, June 5, 2009
154. Institut für Anorganische Chemie der Univ. Stuttgart & Max-Planck Institute, June 9, 2009.
155. SpecialGDCh Lecture at Universität Leipzig, June 10, 2009.
156. Institut für Anorganische Chemie der Universität Münster, June 17, 2009.
157. Chemistry Department, University of Illinois at Urbana-Champaign, September 22, 2009.
158. Chemistry Department, Indiana Univ.-Purdue Univ. (IUPUI), Indianapolis, October 14, 2009.
159. Chemistry Department, Quincy University, Quincy, Illinois, October 30, 2009.
160. Phi Sigma Biological Sciences Honor Society, NIU, November 5, 2009.
161. "MATCON-2010", Cochin Univ. of Science & Technology, Cochin, India, Jan 11-13, 2010.
162. Rowan University, Glassboro, New Jersey, April 16, 2010
163. Keynote Lect., 4th Annual Undergrad Res. Symp., William Paterson Univ., April 17, 2010
164. Keynote Lect., CME on Nanotechnology in Cancer Therapy, Kalinga Institute of Medical Sciences (KIMS), Bhubaneswar, India, October 20, 2010.
165. Invited Speaker & Chair, BIT's NanoMedicine-2010 Conf., Beijing, October 23-25, 2010

166. Invited Speaker at the Symposium on "Preparation and Reactions of Early Transition Metal and Lanthanide Compounds", PACIFICHEM-2010, Honolulu, Hawaii, December 15-20, 2010.
167. Board of Trustees Professor Seminar, Northern Illinois University, March 22, 2011.
168. Beling Lectureship, Illinois Wesleyan University, Bloomington, IL, March 28, 2011.
169. IMEBORON-XIV, Niagara Falls, Canada, September 11-15, 2011
170. Department of Biological Sciences, DePaul University, Chicago, October 20, 2011.
171. IDTechEx Printed Electronics USA 2011 Conference, Santa Clara, Nov. 30 - Dec. 1, 2011.
172. Chemistry Department, Rutgers University-Newark, New Jersey, March 14, 2012.
173. Featured Speaker at Alumni Association's Distinguished Professorship Lecture Series on *New Frontiers of Nanotechnology*, William Paterson University, New Jersey, March 15, 2012.
174. Participant, ALEKS Chemistry Symposium, Savannah, Georgia, April 13, 2012.
175. Ningbo Institute of Materials Technology & Engineering (NIMTE) of the Chinese Academy of Sciences, Ningbo City, China, July 2, 2012.
176. Invited Speaker, 5th International Workshop on Recent Advances in Chemistry, Colima, Mexico, August 29-31, 2012.
177. Invited Speaker, 4th Interdisciplinary Symposium on Materials Chemistry (ISMC-2012), Bhabha Atomic Research Center (BARC), Mumbai, India, December 11-15, 2012.
178. Mahatma Gandhi University, Kottayam, Kerala State, India, December 17, 2012.
179. Indian Institute of Science (IISc)-IPC Division, December 19, 2012.
180. Public Lecture at STEM TEEN READ, NIU Outreach Program, March 19, 2013
181. Chemistry Department, Fudan University, Fudan, China, April 1, 2013.
182. Tianjin University, Tianjin, China, April 15, 2013.
183. Chemistry Department, Nankai University, Tianjin, China, April 17, 2013.
184. Chemistry Department, Nanjing University, Nanjing, China, April 19, 2013.
185. Institut für Anorganische Chemie der Univ. Stuttgart & Max-Planck Institute, April 30, 2013.
186. Plenary Speaker at the Simposio Nacional en Ciencias Quimicas at the Universidad de Colima, August 22-23, 2013,
187. Plenary Speaker at Organometallic and Coordination Chemistry: Fundamental & Applied Aspects International Ship Conference at Nizhny Novgorod, INEOS-RAS, Sept. 1-7, 2013.
188. Public Lecture on Positivity at Ningbo Institute of Materials Technology & Engineering (NIMTE) of the Chinese Academy of Sciences, Ningbo City, China, December 26, 2013.
189. Keynote Speaker at the International Conference on Chemistry Cutting Edge: Nano, Green and Beyond held at St. Xavier College, Mumbai, January 6-7, 2014.
190. Bhabha Atomic Research Center (BARC), Trombay, Bombay, India, January 8, 2014.
191. Symposium in Honor of Larry Sneddon Receiving the F. Albert Cotton Award, 247th ACS National Meeting, Dallas, Texas, March 16-20, 2014
192. CAS Visiting Professor for Senior International Scientist at Ningbo Institute of Materials Technology & Engineering (NIMTE) of the Chinese Academy of Sciences, Ningbo City, China, May 10-June 8, 2014.
193. Chairman and BORAM Award Presentor at the 14th Conference of the Boron in the Americas (BORAM-XIV), Rutgers University-Newark, NJ, June 15-19, 2014.

194. Plenary Speaker at IMEBORON-XV, Prague, Czech Republic, August 24-29, 2014.
195. Scientific Advisory Visit as High-End Foreign Expert of the State Administration of Foreign Experts Affairs (SAFEA), Ningbo, China, November 11-29, 2014.
196. Invited Speaker, 5th Interdisciplinary Symposium on Materials Chemistry (ISMC-2014), Bhabha Atomic Research Center (BARC), Mumbai, India, December 9-13, 2014.
197. Invited Speaker, International Symposium on New Horizons in Chemistry (ISNHC-2-14), V. E. S. College of Arts, Science & Commerce, Chembur-Mumbai, India, December 9, 2014.
198. Symposium on New Directions in Chemical Synthesis: A Felicitation to Professor Herbert W. Roesky, Indian Institute of Technology (IIT)-Powai – Mumbai, India, December 10-11, 2014.
199. Chemistry Department of K. V. Pendharkar College, Dombivli/Mumbai, India, Dec. 12, 2014.
200. Jawaharlal Nehru Centre for Adv. Sci. Res. (JNC-ASR), Jakkur-Bangalore, December 19, 2014.
201. Department of Biopharmaceutical Sciences, UIC College of Pharmacy, February 2, 2015.
202. Department of Chemistry, Knox College, Galesburg, Illinois, February 19, 2015.
203. Lifelong Learning Institute, Northern Illinois University-HSC, April 14, 2015.
204. Plenary Lecture at the ZING Conference in Parador de Oropesa, Spain, October 4-7, 2015.
205. Plenary Lecture at the Pacifichem-2015 in Honolulu, Hawaii, December 19-20, 2015.
206. Chemistry Department, Clemson University, South Carolina, September 22, 2016.
207. Plenary Lecture at ICNCT-2017 at the University of Missouri-Columbia, October 2-7, 2016.
208. STEM Colloquium at Northern Illinois University, November 10, 2016.
209. Plenary Lecture at ICBC-2017, Henan Normal University, China, July 5-8, 2017.
210. Keynote Lecture at IMEBORON-XVI, Chinese University of Hong Kong, July 9-13, 2017.
211. Keynote Lecture at 3rd International Conf. on Organic Chemistry, Chicago, July 17-19, 2017.
212. OCM Message, 2nd Internatl. Conf. on Metabolic Syndrome, London, UK, August 10-11, 2017.
213. Middle Tennessee State Univ., Chemistry Dept., Murfreesboro, Tennessee, February 22, 2018.
214. Keynote Lecture at the Internatl Conf. on Cancer Therapy, London, UK, April 30-May 2, 2018.
215. Plenary Lecture at Simposio Mexicano de Quimica Supramolecular, Colima, Aug. 14-17, 2018.
216. WebEx Lecture Presentation at the Neutron Capture Therapy (NCT) International Working Group (WG) organized under the auspices of the NCI Radiation Research Program of National Institute of Health, June 3, 2019.
217. Plenary Lecture at VIIth National Inorganic Chemistry Congress, Hittite University, Turkey, June 19-22, 2019.
218. Plenary Lecture at the First Workshop on Boron Applications in Health, Kütahya, Turkey, November 7, 2019.
219. Invited Lecture at the Loma Linda University School of Medicine, Loma Linda, California, January 9, 2020.
220. Invited Zoom Lecture at Illinois Wesleyan University, Bloomington, IL, October 9, 2020.
221. Invited Zoom Lecture at the Neuro Oncology Subcommittee of Society for Brain Mapping & Therapeutics (SBMT), California, USA; February 11, 2021.
222. Invited Zoom Lecture at Chemistry Dept., Widener University, Chester, PA, March 24, 2021.
223. Invited Zoom Lecture at the Nanoneuroscience/Nanoneuromedicine Subcommittee of Society for Brain Mapping & Therapeutics (SBMT), California, USA; April 1, 2021.

REFERENCES

1. Prof. Russell N. Grimes
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2. Prof. Thomas P. Fehlner
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3. Prof. Herbert W. Roesky
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Tammannstrasse 4
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++ 49-551-393001/393045

4. Prof. Dennis Kevill
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Northern Illinois University
DeKalb, Illinois, 60115
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PATENTS

1. Bernard F. Spielvogel and NARAYAN S. HOSMANE, "Fused Polyhedron Borane Dianion", United States Patent 6,525,224 B1, 2003.
2. NARAYAN S. HOSMANE and Amartya Chakrabarti, "Crystalline Graphene and Method of Making Crystalline Graphene", WO 2013/036272 A1, 2013 / EP2753577 A1, 2014.
3. NARAYAN S. HOSMANE, Amartya Chakrabarti, and Shena M. Peter, "Boron Nitride and Method of Producing Boron Nitride", United States Patent 2017/0018357 A1, January 19, 2017.
4. Matthew S. Northam and NARAYAN S. HOSMANE, "Photo-Activated Polymers and Use in Articles and Methods of 2D and 3D Printing", United States Patent 2017/0037260 A1, February 9, 2017.
5. **Boron nitride and method of producing boron nitride**

   Publication number: 20190244756

   Abstract: BN nanosheets are prepared by a method comprising heating to a temperature of at least 500° C., a mixture comprising: (1) an alkali borohydride, and (2) an ammonium salt. NaN3 may be included to increase the yield. No catalyst is required, and the product produced contains less than 0.1 atomic percent metal impurities.
   Type: Application
   Filed: February 7, 2019
   Publication date: August 8, 2019
   Applicant: Board of Trustees of Northern Illinois University
   Inventors: Narayan S. Hosmane, Amartya Chakrabarti, Shena M. Stanley

6. **Boron nitride and method of producing boron nitride**

   Patent number: 10236122

Abstract: BN nanosheets are prepared by a method comprising heating to a temperature of at least 500° C., a mixture comprising: (1) an alkali borohydride, and (2) an ammonium salt. NaN3 may be included to increase the yield. No catalyst is required, and the product produced contains less than 0.1 atomic percent metal impurities.
Type: Grant
Filed: November 18, 2014
Date of Patent: March 19, 2019
Assignee: The Board of Trustees of Northern Illinois University
Inventors: Narayan S. Hosmane, Amartya Chakrabarti, Shena M. Peter

7. **Photo-Activated Polymers and Use in Articles, and Methods of 2D and 3D Printing**

Publication number: 20170037260

Abstract: Photo-activated polymers and co-polymers exhibit colors in the visible spectrum when photo-activated. The photo-active polymers, co-polymers and combinations thereof may be utilized in articles to impart color to the articles. For example, the photo-active polymers may be utilized in printing technology, such as in 2D printing and/or in 3D-printing methods to impart colors to articles.
Type: Application
Filed: August 5, 2016
Publication date: February 9, 2017
Inventors: Matthew S. Northam, Narayan S. Hosmane

8. **Boron nitride and method of producing boron nitride**

Publication number: 20170018357

Abstract: BN nanosheets are prepared by a method comprising heating to a temperature of at least 500° C., a mixture comprising: (1) an alkali borohydride, and (2) an ammonium salt. NaN3 may be included to increase the yield. No catalyst is required, and the product produced contains less than 0.1 atomic percent metal impurities.
Type: Application
Filed: November 18, 2014
Publication date: January 19, 2017
Applicant: Board of Trustees of Northern Illinois University
Inventors: Narayan S. Hosmane, Amartya Chakrabarti, Shena M. Peter

9. **Crystalline graphene and method of making crystalline graphene**

Patent number: 9340430

Abstract: A method of producing graphene comprises forming a composition comprising magnesium and carbon, and isolating graphene from the composition. The isolated graphene is crystalline.
Type: Grant
Filed: December 6, 2011
Date of Patent: May 17, 2016
Assignee: Board of Trustees of Northern Illinois University
Inventors: Amartya Chakrabarti, Narayan S. Hosmane

10. **Crystalline graphene and method of making crystalline graphene**

Publication number: 20140193575

Abstract: A method of producing graphene comprises forming a composition comprising magnesium and carbon, and isolating graphene from the composition. The isolated graphene is crystalline.
Type: Application
Filed: December 6, 2011
Publication date: July 10, 2014
Applicant: Board of Trustees of Northern Illinois University
Inventors: Narayan S. Hosmane, Amartya Chakrabarti

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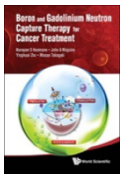

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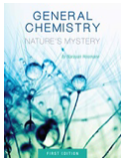

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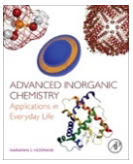

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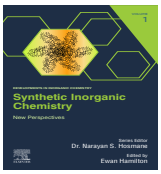

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166. *NARAYAN S. HOSMANE, "Dendritic and Nanostructured Boron Compounds for Cancer Therapy", Invited Virtual Lecture on Zoom, Illinois Wesleyan University October 9, 2020.

167. *NARAYAN S. HOSMANE, "Dendritic and Nanostructured Boron Compounds for Cancer Therapy", Invited Virtual Lecture on Zoom at the Neuro Oncology Subcommittee of Society for Brain Mapping & Therapeutics (SBMT), California, USA; February 11, 2021.

168. *NARAYAN S. HOSMANE, "Dendritic and Nanostructured Boron Compounds for Cancer Therapy", Invited Virtual Lecture on Zoom, Widener University, PA, March 24, 2021.

169. *NARAYAN S. HOSMANE, "Dendritic and Nanostructured Boron and Gadolinium Compounds for Cancer Therapy", Invited Virtual Lecture on Zoom at the Nanoneuroscience/Nanoneuromedicine Subcommittee of Society for Brain Mapping & Therapeutics (SBMT), California, USA; April 1, 2021.

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