

## CURRICULUM VITAE

Prof. Dr. Dr. (h. c.) Sanjay Mathur

---



**Name:** MATHUR Sanjay

**Date of Birth:** 02.07.1968

**Status:** Married to Dr. Charu Mathur; 2 Sons (24 and 21 Years)

**Address:** Frechener Weg 65, 50859 Koeln

**Contact:** Tel.: 0171-7633026; [sanjay.mathur@uni-koeln.de](mailto:sanjay.mathur@uni-koeln.de)

**Position:** Director & Chair, Institute of Inorganic Chemistry, University of Cologne, D 50939 Cologne, Germany.

• Phone (Work): 0221-470-/4107/4657 • Fax (Work): 0221-470-4899

### 1. ACADEMIC QUALIFICATIONS

**2004:** Habilitation, Saarland University, Saarbrücken, 2004, Germany

**1992:** Doctor of Philosophy, Chemical Laboratories, University of Rajasthan, Jaipur, India

**1989:** Master of Philosophy (M. Phil), Physical Chemistry, Vikram University, Ujjain, India.

**1988:** Master of Science (M. Sc.), Physical Chemistry, Vikram University, Ujjain, India, 1988

### 2. PROFESSIONAL BACKGROUND

- Director, Institute of Inorganic Chemistry, University of Cologne (May 2008)
- Professor of Chemistry, Wuerzburg University, Wuerzburg (Sept. 2006 – April 08)
- Head, CVD Division, Institute of New Materials, Saarbrücken (2002 – 2008)
- Senior Scientist, Saarland University, Saarbrücken, Germany (1996 – April 2002).
- Alexander von Humboldt Fellow (1994-96), Institute of Inorganic Chemistry, Saarbrücken.
- R & D Executive in Panacea Pharmaceuticals Ltd, New Delhi, India (1993 – March 1994)

**\*Calls Declined:** Director, Institute of Functional Materials, KTH, Stockholm (2013, declined); Director, Institute for Ceramics Component Technologies, University Stuttgart (2021, declined); Director Fraunhofer Institute of Surface Technologies, IST, TU Braunschweig (declined, 2023)

### 3. PROFESSIONAL AND CORPORATE ACHIEVEMENTS

**1994:** *Fellowship* of the Alexander von Humboldt Foundation, Germany

**2003:** *Young Observer Prize* of the International Union of Pure and Applied Chemists- IUPAC

**2003:** *Research Award* of the Federation of German Chemical Industries

**2005:** *INOLEC Lecture Award*, University of Brno, Czech Republic

**2008:** *Research Award* of the Industry & Chamber of Commerce, Schweinfurt, Germany

**2009:** ASM International-IIM Visiting Lectureship Award, ASM International

2010: *Global Star Award* of the ECD of American Ceramic Society  
 2010: Appointment as Advisor, Review Advisory Panel, CSIR, South Africa  
 2012: *Academician*, World Academy of Ceramics, Italy  
 2012: *International Ambassador*, University of Cologne  
 2013: *Director & Adjunct Professor*, Xian Jiao Tong University, Xian, China  
 2014: *World Class University Distinguished Professor*, Chonbuk University, Korea  
 2014: *Fellow*, the American Ceramic Society  
 2014: *Bridge-Building Award*, American Ceramic Society  
 2015: *Lee Hsun Award*, Institute of Materials Res – Chinese Academy of Science, China  
 2015: *AkzoNobel Surface Innovator Award*, Jointly awarded by AkzoNobel and SSPC, India.  
 2016: Honorary Doctorate (*h.c.*), Vilnius University, Lithuania  
 2016: Presidential Lecture Awardee, Council of Scientific & Industrial Research, South Africa  
 2016: Global Initiative of Academic Networks (GIAN) Lecturer on Invitation of Govt. of India  
 2017: *Fellow*, the ASM International, USA  
 2017: Visiting Professor, Global Innovation & Research Center, TUAT, Tokyo, Japan  
 2018: International Visiting Fellow, RMIT, Melbourne, Australia  
 2019: Awarded, President's Appreciation Award, KITECH, Korea  
 2019: Lifetime Achievement Award, Indian Science Congress Association, Kolkata, India  
 2020: Elected to serve on the DFG Expert Panel (Fachkollegiat) for Functional Materials  
 2020: Appointed as Board Member of the German Ceramic Society (DKG).  
 2021: Elected Member of European Academy of Science, Brussels, 2021.  
 2021: Appointed to European Materials Research Council, Strasbourg, 2021.  
 2021: Elected Member, International Union of Materials Research Societies (IUMRS; 2021-).  
 2021: Woody White Award, Materials Research Society (MRS), USA.  
 2021: Elected Foreign Member of National Academy of Sciences India.  
 2022: International Frontiers Award of International Union of Materials Research Societies.  
 2022: Orton Jr. Lectureship Award of the American Ceramic Society, USA.  
 2022: Faculty Teaching Prize (Chemistry), University of Cologne.  
 2023: Medal for Excellence in Chemical Research, Chemical Research Society India  
 2023: Faculty Award for "Excellence in Teaching", University of Cologne, Germany  
 2023: Elected Secretary of the International Unions of MRS (IU-MRS)  
 2023: President, American Ceramic Society (2022-23).  
 2024: Elected Fellow of the Materials Research Society, USA (FMRS)  
 2024: Elected Fellow of the Royal Society of Chemistry, UK (FRSC)

#### 4. PRODUCTIVE SCHOLARSHIP & PROFESSIONAL SERVICES

Dr. Mathur has also made significant contributions to the ceramics and materials science community over the past two decades, by serving as an Editor or Member of editorial boards for many international journals. He currently serves as Editor and Editor-in-Chief to internationally acknowledged journals **Nano Energy** (Elsevier, since 2016) and Intl. Journal of **Electroceramics** (Springer-Nature), respectively. He is also Vice-Editor in Chief of **Intl. J. of Minerals, Metallurgy and Materials**. As the immediate Past-President for the American Ceramic Society (2023-24), he has initiated several ACerS International Chapters including one at the University of Cologne. He was elected as the Fellow of the European Science

Academy (2020) and National Academy of Science, India (2021). He is a Board Member of the German Ceramic Society (2019) and the chemical industry foundation ChemCologne. He has chaired/co-chaired several international conferences and has led successful symposia at the MS&T, ACerS, MRS, E-MRS and PacRim meetings. He has served as the Chair of the Kawli Awards Committee of MRS. He serves as an elected member of the Review Board of the German Science Foundation (DFG), the European Science Council and the Executive Committee of the International Union of Materials Research Society (IUMRS).

## 5. MENTORING

Sanjay Mathur is the Director of the Institute of Inorganic Chemistry at the University of Cologne, Germany. He is an Honorary Professor at the International Research Center for Renewable Energy at the Xian Jiao Tong University, Xian, China and is currently the SPARC Adjunct faculty at IIT Madras, India. Dr. Mathur has mentored a number of researchers by direct supervisions of young scientists and students at post-doctoral (>45), doctoral (>80) and Masters (> 65) levels. His group has hosted so far scientists and PhD students from a large number of nations including **China, India, Japan, Korea, Spain, France, Russia, Argentina, Mexico, Pakistan, Taiwan, USA, Singapore, South Africa, Turkey, Czech Republic, Egypt, Lebanon, Sudan, Poland, Iran, Italy, Morocco, and Canada.**

## 6. PUBLICATIONS and PATENTS

Dr. Mathur has published over **550 articles** including **15 reviews** and **book chapters**, which have been cited over 20,800 times. He has been invited to speak at over 200 international conferences and has given over 250 seminars in 35 countries. In addition, he has edited 11 books in the field of nanomaterials science and engineering. He is recognized as one of the highly cited authors in ceramics (h-index 76). The materials and technologies developed by his group are employed in various industrial products/components (sensors, electrodes, filters, catalytic supports, etc.) through technology transfer and industrial collaborations that are described in 11 patents. Over the years Dr. Mathur has led many joint research projects with industry and has been actively involved with technology transfer and industrial collaboration with numerous companies, including **Siemens, Varta, Henkel, Merck, BASF, LANXESS, SCHOTT** and **Hyundai Motor Company** into various products/components.

## 7. RESEARCH INTERESTS and IMPACT

Mathur has developed advanced technical expertise and insight in the development of chemical concepts for synthesis and processing of nanostructured ceramics and composites for energy and health applications. He has made pioneering contributions in demonstrating the potential of chemical processing of materials by transforming specially designed chemical precursors into nanocrystalline ceramics and composites. His group has developed new concepts for processing metal oxide nanoparticles, nanowires and nanostructured coatings

for applications targeting bio-medical (drug delivery, implant integration), sensors (gas and humidity), protective (barrier and corrosion-resistant coatings) and functional surfaces (TCOs, photo-catalytic, hydrophobic/hydrophilic). He has coordinated many joint research projects with European Consortia and industry and he has been actively involved in technology transfer and industrial collaboration in the field of sensors, electrodes, filters, catalytic supports, and battery applications. In addition, he actively supports the transfer of German technologies to emerging markets in Asia through a Steinbeis Technology Transfer Company (Materials Alliance Cologne; [www.materialsalliance.com/de](http://www.materialsalliance.com/de)) that he founded in Cologne.

A handwritten signature in blue ink, consisting of a stylized 'W' or 'M' shape with a vertical line through it, followed by a large loop and a small tick mark.

Cologne, January 2024