## Curriculum Vitae of Rigoberto C. Advincula

Governors' Chair Professor and Group Leader, Oak Ridge National Laboratory (ORNL), Center for Nanophase Materials Sciences (CNMS)
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**EDUCATION:**

- Ph.D. in Chemistry, 1994. The University of Florida, Department of Chemistry, Gainesville, FL
- B.S. in Chemistry, 1987. The University of the Philippines, Institute of Chemistry, Diliman, Quezon City, Philippines.

**HONORS, PROFESSIONAL RECOGNITION, LEADERSHIP (HIGHLIGHTS:**

- *Fellow,* Materials Research Society
- *Fellow,* National Academy of Inventors
- *International Prize*, The Society of Polymer Science, Japan
- *Fellow*, Institute of Materials, Minerals, and Mining
- *NATAS Fellow, North American Thermal Analysis Society*, 2023
- *Co-President*, 2023 Pacific Polymer Federation (PPF) of Polymer Societies
- *Fellow, Royal Society of Chemistry*, 2023, polymer chemistry contribution
- *Lifetime Distinguished Achievement Award*, University of the Philippines Alumni Assoc. 2022
- *National Academy of Science and Technology* (Philippines), Elected Member, 2018
- *Editor in Chief,* MRS Communications (Materials Research Society) 2017
- *Chair*, Polymer Chemistry Division, American Chemical Society (ACS) 2015
- *Herman Mark Scholar Award*, Poly. Chem. Div., American Chemical Society, 2013
- *Fellow*, American Chemical Society (ACS) 2010
- *Fellow,* Polymer Materials Science and Engineering (PMSE) Division 2011, ACS
- *Fellow,* Polymer Chemistry Division 2011, ACS
- *Editor,* Reactive and Functional Polymers (Elsevier) 2012-2017
- *Editor,* Macromolecular Research (Springer) 2010-2017
- *Associate Editor,* Polymer Reviews (Taylor & Francis) 2014-2017
- *Regional Editor,* Journal of Bioactive and Compatible Polymers (Sage) 2011-206
- *ISI Knowledge Citation Summary from 1991-present and Google Scholar:* H-index = 81, average of 450 citations per year, average of 30 citations per article, and 23,145 total citations.
- *World Economic Forum,* Council Member, Global Future Council, 2016-2018.
- *National Science Foundation,* Biomaterials: Tools and Foundry Workshop, Organizer and Leader, Arlington, VA 2016.
- *Chair,* Nanotechnology and Corrosion TEG 474X Technical Committee of NACE, 2016

- *Member,* NAKFI Imaging Science Report Review Committee, Keck Foundation and National Academies (NAS, NAE, IM) 2016
- *Polymer Pacific Federation,* Council Member 2015
- *IUPAC Division 4 (Polymer) Council,* Member (elected) 2015
- Elected to *National Institute of Health (NIH) College of CSR Reviewers,* 2010
- NSF *Hybrid Flexible Electronics and Photonics Workshop,* Invited 2010
- *National Academy of Science, National Academy of Engineering, and Institute of Medicine,* Keck Futures Initiative in Imaging Science, Invited Participant, 2010
- *Excellence in Science and Technology Award*, Philippine Dev-USA Foundation, 2010
- *Koh Science Award*, Philippine-American Academy of Scientists and Engineers, 2010
- *Excellence in Undergraduate Research Mentoring Award,* University of Houston, 2009
- *Balik Scientist Awardee,* Dept. of Science and Technology (DOST) Philippines 2009
- *Engineering Research and Development Technology (ERDT) Fellow,* Philippines*,* 2008.
- *Technical Focus Lecturer Award*, American Coatings Association (FSCT), ICE 2007.
- *Research Excellence and Scholarship Award,* University of Houston, 2007.
- *Arthur Doolittle Award,* American Chemical Society, PMSE Division, 2003.
- *NSF-CAREER Award*, National Science Foundation, 1999.
- *Alexander Von Humboldt Research Fellow*, Germany, 1995.
- *Intel Science Award Finalist* Mentor, 2007
- *UPAA Outstanding Alumni Award,* 2013
- Visiting Professor, Waseda University, Japan 2017
- Visiting Professor, Kansai University, Japan 2018
- Visiting Professor, Keio University, Japan 2018
- Visiting Professor, Chulalongkorn University, Thailand 2016
- Visiting Professor of Venture Business Laboratory TUAT, VBL Program, Japan, 1997.
- Visiting Professor, Adjunct Professor, University of the Philippines, Institute of Chemistry and Dept. of Chem. Eng. 2008 and 2009.
- Visiting Professor, Adjunct Prof., University of Santo Thomas, Dept. of Chemistry, 2009.
- NSF Molecular Electronics Workshop*,* Invited, 2007.
- *National Academy of Science, National Academy of Engineering, and Institute of Medicine,* Keck Futures Nanoscience Initiative, Invited, 2004.
- NSF Materials Chemistry Workshop*,* Invited, 2002.
- *Phi Beta Kappa Honor Society*, elected, April 1995.
- *University National Scholarship*, NSTA, Philippines B.S. in Chemistry, 1983.
- *ACS Colloids Division,* Best poster award 3 times, 2005, 2010 (co-author).
- *SPE, Polyolefins Conference,* Houston, Best poster award 2009 (co-author).
- *Chair,* Alabama local Section, American Chemical Society (ACS) (2001).
- *Membership:* American Chemical Society (ACS), Materials Research Society (MRS), American Assoc for the Advancement of Science (AAAS), National Assoc, of Corrosion Engineers (NACE), Philippine American Association. of Scientists and Engineers (PAASE), Society of Plastic Engineers (SPE), Society of Petroleum Engineers, Society of Protec Coatings SSPC.
- Nominated to the American Chemical Society's *Carl Marvel Creativity Award* and *Stanley Israel Award;* and Welch Foundation's *Norman Hackerman Award.*
- *Grant Peer-Reviewer and Panelist:* National Science Foundation (NSF) - Materials, Chemistry, Engineering, EPM, BIOMAT,CEMRI, MRSEC, STC, MRI, MWN, IGERT, CAREER, SBIR, STTR, National Academy of Sciences (NAKFI), National Institute of Health (NIH) – Nano Panel, SBIR Panel, Department of Energy (DOE), Department of Defense (DOD), ACS-PRF, Department of State, KAUST.

- *Journal Peer Reviewer:* 54 peer-reviewed Journal Titles, *Nature, Nature Materials, JACS, Advanced Materials, Macromolecules, Chemistry of Materials, Langmuir, J. Phys. Chem., Nanoletters, Macrom. Rapid Comm., ACS Nano.*
- *Plenary, keynote, invited, workshop speaker, and symposia organizer to international, national, and topical conferences* on polymers, nanoscience, display devices, electronic materials, interfacial science, coatings, etc.: Nanopia 2018, Macromex 2017, PPC 2017, ACS, MRS, APS, IUPAC PSK-40 (2016), IUPAC Macro 2014, PPC14, Pacifichem 2015, Chemistry: Oil & Gas 2014, 2015, Advanced Coatings 2015, 2016, Coatings Tech (2015), Waterborne Symposium (2015), ISOME 2014, PPC13 (2013), Polymer Zing Conference 2012, NanoKorea 2012, SDDM 2012, ICAE 2011, ME&D 2011, Smart Coatings 2011, Pacifichem 2010, Nano-Coatings 2010, MVS 2010, ICSM 2010, RSCE 2009, EMAPP 2009, PAT 2009, Particles 2009, Nanotech 2009, PCC 2009, Smart Coatings 2009, GRC Polymer West 2009, IUPAC Macro 2008, NanoKorea 2007, Pacifichem 2005, US-Japan POLYMAT 2008, IDC-NICE 2008, Polycom 2008, Stimuli-Responsive Polymers 2009, IDS6 2009, UP-SCAN 2009, Macromex 2008, JBST-Metrology 2008, Hybrid-Organic Inorganic Polymers 2008, Smart Coatings 2008, Eurasia 2008, ICMAT 2007, PAT 2007.

**PROFESSIONAL EXPERIENCE:**

- **2020-Present:** Governor's Chair *Professor, ORNL-UT, Group Leader* at **Oak Ridge National Laboratory**, Oak Ridge, TN and **University of Tennessee at Knoxville**, Department of Chemical and Biomolecular Engineering, Department of Materials Science and Engineering, Department of Mechanical, Aerospace, and Biomedical Engineering and
- **2020-Present:** *Adjunct Professor,* **Case Western Reserve University**, Department of Macromolecular Science and Engineering and Department of Biomedical Engineering, Cleveland, OH.
- **2012-2019:** *Professor (Secondary Faculty),* **Case Western Reserve University**, Department of Chemistry and Department of Biomedical Engineering, Cleveland, OH.
- **2012-2019:** *Full Professor,* **Case Western Reserve University**, Department of Macromolecular Science and Engineering and Department of Biomedical Engineering, Cleveland, OH.
- **2007-2011:** *Professor***, University of Houston**, Department of Chemistry and Department of Chemical Engineering, Houston, TX.
- **2005-2007:** *Associate Professor* Joint Appointment, **University of Houston**, Department of Chemical Engineering, Houston, TX.
- **2002-2007:** *Associate Professor*, **University of Houston**, Department of Chemistry, Houston, TX.
- **1997-2002**: *Assistant Professor*, **University of Alabama at Birmingham**, Department of Chemistry, Birmingham, AL. Tri-Campus Materials Program Faculty and Adjunct Prof. with Department of Materials Eng. and Dept. of Biomedical Eng.
- **1996-1997**: *Post-Doctoral Research Fellow*, **Stanford University**, Department of Chemical Engineering, Stanford, CA. Advisors: Curt Frank and Wolfgang Knoll.
- **1995-1996**: *Alexander Von Humboldt Research Fellow*, **Max Planck Institute for Polymer Research**, Mainz, Germany. Advisor: Wolfgang Knoll.
- **1991 and 1993**: *Visiting Scientist*, **Institut Charles Sadron** and IPCMS- Group Materiaux Organique, CNRS, Strasbourg, France.
- **1989-1993:** *Teaching Assistant,* **University of Florida**, Department of Chemistry.

**PROFESSIONAL ACTIVITIES (Highlights):**

1. Organizer of National and International Symposia:
   - *NSF Biomaterials Workshop: Tools and Foundry 2016,* Arlingtron, VA – Principal Organizer.
   - *Advanced Coatings 2016 Conference,* Houston, TX - Organizer
   - *Pacifichem 2015:* Symposium Organizer of Polymers for Energy and Optoelectronic Devices (#361) and Advances in Polymers for Medicine (#52).

- *Pacific Polymer Federation (PPF) 14th International Conference* in Kauai, HI. Organizer together with Kris Matyjaszewski, Bill Daly, Ken Wynne with the Polymer Chemistry Division, ACS.
- *Oil and Gas Chemistry 2015*, Houston, TX - Organizer.
- *Coatings for Oil & Gas,* Houston, TX May 2016 - Organizer.
- *Chemical Innovationeering* Workshop with SPIK 2015*,* Manila, Philippines. Organizer
- *MACRO 2014,* IUPAC International Conference on Polymers in Chiangmai, Thailand.
- *Macropro 2014* Polymers for Oil and Gas, Houston, TX. March 20-21, 2014
- *Polymers for Oil and Gas* at the 247th, ACS National Meeting in Dallas, TX. March 2014.
- *MACROMANILA 2013,* Joint Polymer Conference with CWRU-UP, May 2013.
- *Macromex 2011* with the Mexican Polymer Society and ACS in Cancun, Mexico. Together with Kris Matyjaszewski, Ken Wynne, Gabriel Luna, and Enrique Saldivar.
- *Hybrid Conjugated Polymers and Nanomaterials*, Pacifichem 2010, Honolulu, HI December 2010. Co-organizers Prof. Wolf and Prof. Valiyaveettil.
- *Polymers $P^3$: Polymers for Packaging, Paints, and Pharmaceuticals 2010,* Manila Philippines, University of the Philippines, Institute of Chemistry and Balik Scientist Program.
- *Polymer Innovations and the Global Economy*, 239th American Chemical Society National Meeting, Polymer Division, San Francisco, CA March 2010, together with Kathleen Havelka and Dennis Smith.
- *Polymer Materials and Analysis Workshop 2009,* Manila Philippines, University of Santo Thomas, Faculty of Science and Balik Scientist Program.
- *Surface Characterization and Analysis at the Nanoscale (SCAN) Workshop 2009,* Manila Philippines, University of the Philippines, Institute of Chemistry and Balik Scientist Program.
- *Smart Coatings 2009* Orlando, FL. Co-organizer together with Prof. Jamil Baghdachi.
- *SCAN: Surface Characterization and Analysis at the Nanoscale 2009,* University of Houston and KSV Instruments.
- *US-Japan POLYMAT 2008* Japan Polymer Society and Polymer Chemistry Division, ACS, Ventura, CA. Organizer together with Prof. Hiroyuki Nishide.
- *Macromex 2008* Mexican Polymer Society and Polymer Division, ACS. Los Cabos, Mexico. Together with Kris Matyjaszewski, Gabriel Luna, and Enrique Saldivar.
- *Macromolecular Assemblies for Biomolecules, Cells, and Tissues Symposium* 236th American Chemical Society National Meeting, PMSE Division, Philadelphia, PA August 2008, together with Prof. Wolfgang Knoll.
- *POLYCOM 2008,* Biennial Meeting ACS Polymer Division, Galveston, TX. Co-organizer with Dennis Smith and Kathleen Havelka.

2. <u>Symposium Session Chairs:</u>
   - *Pacifichem 2015:* Polymers for Energy and Optoelectronic Devices (#361) and Advances in Polymers for Medicine (#52).
   - *Pacific Polymer Federation (PPF) 14th International Conference* in Kauai, HI.
   - *MACRO 2014,* IUPAC International Conference on Polymers in Chiangmai, Thailand.
   - *Macromex 2011* with the Mexican Polymer Society and ACS in Cancun, Mexico. Together with Kris Matyjaszewski, Ken Wynne, Gabriel Luna, and Enrique Saldivar.
   - ICSM 2010, Kyoto, Japan. *Hierarchical Electronic Materials Symposium*
   - ICMAT 2007, Singapore. *Polymer and Molecular Electronics Symposium*.
   - Pacifichem 2005, Honolulu, HI, *Supramolecular Thin Films and Devices* and *Azobenzene Containing Smart Materials* Symposia.
   - ACS 230th National Meeting, San Francisco, CA, Polymer Division, *International Conference on Biorelated Polymers,*
   - ACS 225th National Meeting, New Orleans, LA, POLY Division, *Crosslinking Materials and Processes*
   - ACS 225th National Meeting, New Orleans, LA, PMSE Division, *Polymer Surfaces and Interfaces*

- ACS 224th National Meeting, Boston, MA, POLY Division, *Macromolecular Bioconjugates and Natural Biopolymers*
- ACS 222nd National Meeting, Chicago, IL. PMSE Division, *Light Scattering in Polymers,*
- ACS 221st National Meeting, San Diego, CA PMSE Division, *Symposium on Supramolecular Assemblies*
- 2002 MRS Fall Meeting, Boston, MA, *Defect-Mediated Phenomena in Ordered Polymers*
- 2001 MRS Fall Meeting, Boston, MA, *Polymer Thin Films*
- 2001 Gordon Conference, Newport, RI *Organic Thin Films*

3. Invited, Keynote, and Plenary Speaker:
*IUPAC-PSK40 2016 Jeju Island, Korea, Coatings Tech 2015, Waterborne Symposium 2015, EM-NANO 2015, Macro 2014, ISOME 2014, PPC 2013, Polymer Zing Conference 2012, NanoKorea 2012, SDDM 2012, ICAE 2011, ME&D 2011, Smart Coatings 2011, ICSM 2010* July, Kyoto Japan. *Active Polymer Patterning 2009*, Dec., Gyeoung-Ju, Korea. *ASEAN Chemical Engineering Congress 2009*, December, Manila, Philippines. *PAT 2009* – October, Jerusalem, Israel. *Philippine Chemistry Congress 2009,* April Bohol, Philippines. *Molecular Electronics and Bioelectronics 2009* – April, Miyazaki, Japan 2009, *Smart Coatings 2009* – February, Orlando, FL. *Eurasia Chemistry Congress 2008* – January 2008, Manila, Philippines, *Smart Coatings 2008* - February, Orlando, Florida, *Hybrid Organic-Inorganic Materials Workshop 2008* – March, Ventura, CA, *Smart and Nanostructured Coatings 2008*
4. Invited Contribution and Workshop Participant:
*Keck Futures* National Academies, Participant and Contributor in Imaging Science, November 2010, Irvine, CA 2004.*NSF Molecular Electronics Workshop*, Washington, DC, July 2007. *Keck Futures NanoInitiative* National Academies, Participant and Contributor, Irvine, CA 2004. *NSF Materials Workshop*, Wilmington, DE, November 2002.
5. Planning Committees: World Economic Forum, Global Futures Council Member, ICOMF (LB Conference) International Advisory Committee, IUPAC Polymer Education Committee, IEEE 2006 Technical Program Committee (TPC) Member, IEEE International Frequency Control Symposium (IFCS) - Group 4.
6. Panel and Site-visit Reviewer: *National Science Foundation*- IGERT Pre-proposal and Full Proposals, NSF-CAREER Panel, STC Site visit, MRSEC site visit, DMR Instrumentation (MRI), MWN Proposals, SBIR Panel, regular proposals. *Department of Energy,* Center for Nanophase Materials Sciences (CNMS)-ORNL – Proposal Review Committee, KAUST- Center Review, NIH College of Reviewers.
7. Peer-reviewer and Panel Review: for proposals from ACS-PRF, Department of Defense agencies (ARO, ONR, and AFOSR), NIH, NSF, Department of Energy, Department of State.
8. Peer reviewer of Journal articles: *Nature, Nature Materials, Nature Chemistry, Nature Nanotechnology, Nanoletters, Journal of the American Chemical Society (JACS), Chemistry of Materials, Langmuir, Macromolecules, Journal of Physical Chemistry, B , ACS Applied Materials and Interfaces, ACS Nano, Advanced Materials, Advanced Functional Materials, Polymer, Nanoletters, Macro. Rapid. Comm., Chem. Comm., Tetrahedron Lett. Appl. Polymer Science, Polymer Chemistry Journal, Industrial and Eng. Chem. Research, Macromol. Chem. and Phys.,*
9. ACS Polymer Division Officer: Chair (2015), Vice Chair (2014), Chair-Elect (2013), Alternate Councilor (2009- present), Division Treasurer (2005 –2008), and Executive Committee Member. POLY Board representative to the Materials Secretariat Division 2003-2005.
10. Membership in Professional Societies: *Alexander von Humboldt Association of America, American Chemical Society, American Physical Society, American Vacuum Society, American Association for the Advancement of Science (AAAS), Materials Research Society, National Association of Corrosion Engineers (NACE), Society of Petroleum Engineers (SPE), Society of Plastics Engineers. Philippine American Academy of Scientists and Engineers (PAASE)* – member.
11. Visiting Professorship: *Chulanlongkorn University (2016), Austrian Institute of Technology* 2009, 2010, 2011, *University of Paris* 2009, *National University of Singapore,* 2004 and 2006, *Max Planck Institute for Polymer Research*, September-October 2006 and 1999, *McGill University* and *University*

*of Montreal*, CSACS, July 2006, *National University of Singapore*, Department of Chemistry- April-June 2004, *Tokyo University of Agriculture and Technology*, VBL Program, 1997 and Nanotechnology Program-2003.

12. Award Winner: *Herman Mark Scholar* Award 2015 (ACS), *Research Excellence Award UH* 2007, *FSCT Technical Speaker* Award 2007, *Best Poster Award, 227th ACS National Meeting,* first runner up, March 2005. *Arthur Doolittle Award, American Chemical Society, PMSE Division 2003. ACS Colloids Division,*
13. Editorial and Advisory Board: *Macromolecules (2006-2009), Chemistry of Materials, Polymers for Advanced Technologies, Macromol. Chem. and Phys., Macromol. Rapid. Comm., Journal of Bioactive and Compatible Materials, Journal of Macromolecular Research, ACS: Applied Materials and Interfaces.* Editor, *Reactive and Functional Polymers*.