

# Certificación Núm. 46

## Año Académico 2024-2025

UNIVERSIDAD DE PUERTO RICO  
RECINTO DE RÍO PIEDRAS



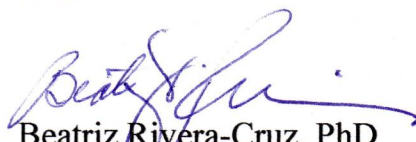
Senado Académico  
Secretaría

Yo, **Beatriz Rivera-Cruz**, Secretaria del Senado Académico del Recinto de Río Piedras, Universidad de Puerto Rico, **CERTIFICO QUE:**

En la reunión ordinaria celebrada de forma asincrónica a partir del 4 de diciembre, y culminada de forma presencial el 10 de diciembre de 2024, se acordó:


- Recomendar a la Junta de Gobierno de la Universidad de Puerto Rico la otorgación de la distinción académica de **Profesor Emérito** al doctor **Carlos R. Cabrera Martínez**, de la Facultad de Ciencias Naturales.

**Y para que así conste**, expido la presente Certificación bajo el sello de la Universidad de Puerto Rico, Recinto de Río Piedras, a los doce días del mes de diciembre del año dos mil veinticuatro.

  
Beatriz Rivera-Cruz, PhD  
Secretaria del Senado

vvr

Certifico correcto:

  
Agnes M. Bosch Irizarry, PhD  
Rectora Interina



Anejo

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## Semblance

### Dr. Carlos R. Cabrera Martínez



Professor Carlos R. Cabrera is the Ralph and Kathleen Ponce de Leon Professor of Chemistry and Chair of the Department of Chemistry and Biochemistry of the University of Texas at El Paso (UTEP). He was former Project Director of the NSF-PREM Center for Interfacial Electrochemistry for Energy Materials (CIE2M) and of the NSF-CREST Center for Innovation, Research and Education in Environmental Nanotechnology (CIRE2N) Programs at the Río Piedras Campus of the University of Puerto Rico (UPR).

Prof. Cabrera obtained a Ph.D. in Chemistry from Cornell University in 1987, under the supervision of Professor Héctor Abruña. He then was a Postdoctoral Research Associate at the University of Texas at Austin from 1987 to 1989 working with Prof. Allen Bard. He started as an Assistant Professor at the Department of Chemistry of the University of Puerto Rico in 1989, was promoted to Associate Professor with tenure in 1992, and to Full Professor in 1997. He was a NASA Administrator Fellow at the NASA Glenn Research Center in 2000-2001. His research interests are in the areas of nanomaterials for alkaline fuel cells, dye sensitized solar cells, microbial fuel cells, and nanobiosensors. As one of the letters of support stated “His pioneering work in the field of electrochemistry, particularly the development of the rotary disk electrodeposition technique (RoDSE) for nanoparticle synthesis, has had a profound impact. This technique is now widely adopted and used for electrochemical metallic nanoparticle synthesis, showcasing his ability to push the frontiers of science.” And in the nomination letter it was stated that “he worked on the ammonia electrochemical removal system (EAR) for water reclamation application with tremendous application on NASA Airspace mission.”

Prof. Cabrera was Founder and Director of the Surface Microscopy and Spectroscopy Facility of the UPR Materials Characterization Center (MCC), Associate Director of the Puerto Rico’s EPSCoR program, founded the Nanoscopy Facility: Transmission Electron Microscope (TEM) and focused ion beam (FIB) at UPR with internal and NASA-URC funds, Project Director of the UPR Center for Nanoscale Materials (NASA-University Research Centers, MUREP), was the first Scientific Director of the UPR’s Molecular Sciences Research Center, and was Associate Vice-President for Research and Development of the UPR System. He has 222 highly cited publications in peer-reviewed journals, has published eight books and book chapters, has two patents, and has given over 190 invited lectures worldwide. He is in the Editorial Board as Associate Editor for the *Journal of Nanotechnology* and has been a member of the Editorial Review Board and Associate Editor of *Research Letters in Nanotechnology*, and currently of the *Journal of Nanotechnology & Advanced Materials*.

He has helped develop state-of-the-art infrastructure and has been pioneer in Puerto Rico and the Caribbean in establishing various centers for nanotechnology research and other new areas of chemistry. In these centers he has brought collaborations with researchers from numerous institutions, such as NASA Glenn Research Center, Ames Research Center, Johnson Space Center, Marshall Space Flight Center, Langley Research Center, DOE-Brookhaven National Laboratory (where he was a Visiting Faculty) , Cornell University and its Cornell High Energy Synchrotron Source (CHESS, where also he was a Visiting Faculty), Nanyang Normal University, Nanyang, Henan Province, China, and the Universidad de Alicante, Spain, among others.

Prof. Cabrera has received numerous awards, such as the Scholarly Productivity Award (SPA)-EPSCoR, UPR in 1989-2001, the Excellence in Teaching and Productivity Award, UPR in 1998, the University of

Puerto Rico President's Research Award in 2000, he was named Professor- Researcher of the year in 2007 given by the Chemistry Graduate Student Society at UPR, and won the Igaravidez Award from the Puerto Rico Section of the American Chemical Society (ACS) in 2010, the ACS-Puerto Rico Excellence in Education Award in 2019, the UTEP Science and Technology Acquisition and Retention (STARs) Award in 2021, and the Ralph and Kathleen Ponce de Leon Professorship in Chemistry at UTEP in 2023. He has won over 40 competitive research grants from different agencies such as the National Science Foundation (NSF), the National Aeronautics and Space Administration (NASA), and the National Institutes of Health (NIH), among others, and has distinguished himself as scientific entrepreneur with the establishment of companies where sensors for the detection of diseases have been developed. He has showed his enterprising spirit by leading a co-founder of BIDEA, LLC, a biosensor startup company build on this biosensor research work. He has been the recipient of four Small Business Innovative Research (SBIR) projects from NASA and NSF. He is Caribbean Regional Representative and Member of the Steering Committee, Lightsources for Africa, the Americas, Asia and Middle East Project (LAAAMP): An IUPAP and IUCr ICSU-Funded Project.

Prof. Cabrera has taught more than ten different courses during his career at UPR and is one of a few professors who has given courses beyond UPR through distance learning from Cornell University and Brookhaven National Laboratory, with students from UPR and other institutions. He has been mentor of over 100 undergraduate students, over 50 graduate students (43 who have obtained Ph.D.s, and those 40 are Hispanics and 23 are women (21 Hispanics), and 5 M.S. degrees), and 10 postdoctoral fellows. Through the centers that he has established he has contributed to the formation of over 1,000 preschool to university students and the development of new faculty, including the creation of the NanoSummer Camp sponsored by the Center for Advanced Nanoscale Materials (funded by NASA-University Research Center) which trained 12 High School teachers and students per year at UPR-Río Piedras, Mayagüez, and Cayey campuses in nanotechnology. He was a member of the Steering Committee of the NIH-BUILDING SCHOLARS Center at UT-El Paso, and Co-Chair of INCREASE (Interdisciplinary Consortium for Research and Educational Access in Science and Engineering), an organization to promote the use of DOE facilities by Minority Serving Institutions., and Chair of the Selection Committee of the ACS George A. Olah Award in Hydrocarbon or Petroleum Chemistry. His commitment to the quality of education in our country is reflected in all his education and knowledge dissemination initiatives in his research centers, which provide opportunities to teachers, students, researchers, and the community.

Professor Cabrera dedication to serving and advancing the chemistry community is also reflected in having been President of the ACS-Puerto Rico Section in 1996 and in 2018, and on being current President-Elect of the ACS Rio Grande Section. In addition, he has been in the Board of Directors of the Nanotechnology Technical Advisory Group (TAG) of the President's Council of Advisors on Science and Technology (PCAST) in 2003-2005, 2007-2008.

As one writer of a support letter stated: "Dr. Carlos R. Cabrera Martínez embodies the spirit and qualities recognized by the Waldemar Adam Award. His extensive contributions to science, education, and interdisciplinary collaboration are exemplary." And another support letter stated: "Carlos is a real gem as a scientist, researcher, colleague and individual".

The Puerto Rico Section of the ACS is honored in awarding its 2023 Waldemar Adam Award for Outstanding Contributions to Chemistry to Prof. Carlos R. Cabrera. Congratulations Carlos!