

## Biographical Sketch - Olga L. Mayol-Bracero

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### Professional Preparation.

- University of Puerto Rico-Río Piedras, Chemistry, BS, 1989
- University of Puerto Rico-Río Piedras, Analytical Chemistry, MS, 1994
- University of Puerto Rico-Río Piedras and Lawrence Berkeley National Laboratory, Analytical Chemistry, Ph.D., 1998
- Max Planck Institute for Chemistry, Germany, Aerosols & Climate, Postdoctoral, 1998-2001

### Appointments.

- Associate Professor (2006 – present) – Department of Environmental Science, ITES, University of Puerto Rico-Río Piedras
- Assistant Professor (2002 – 2005) - ITES, University of Puerto Rico-Río Piedras

### Five Relevant Publications.

- Prospero, J. M. and **O. L. Mayol-Bracero**, Improving our understanding of African dust transport using the Caribbean Basin as the receptor, *IGAC Newsletter*, 43, 2012.
- Gioda, A., G.J. Reyes-Rodriguez, G. Santos-Figueroa, J. Collett Jr., S. Decesari, M.C. Ramos, H.J.C. Bezerra Netto, F.R. Aquino Neto, **O.L. Mayol-Bracero**, Speciation of water-soluble inorganic, organic and total nitrogen in a background marine environment: cloud water, rainwater and aerosol particles, *J. Geophys. Res.*, 116, doi:10.1029/2010JD015010, 2011.
- Martin, S. T., M. O. Andreae, P. Artaxo, D. Baumgardner, Q. Chen, A. H. Goldstein, A. Guenther, C. L. Heald, **O. L. Mayol-Bracero**, P. H. McMurry, T. Pauliquevis, U. Pöschl, K. A. Prather, G. C. Roberts, S. R. Saleska, M.A. Silva Dias, D. V. Spracklen, E. Swietlicki, and I. Trebs, Sources and Properties of Amazonian Aerosol Particles, *Rev. Geophys.*, 48, RG2002, doi:10.1029/2008RG000280., 2010.
- Gioda, A., **O. L. Mayol-Bracero**, Reyes-Rodriguez, G.J., Santos-Figueroa, G., Collett Jr., J., Water-soluble organic and nitrogen levels in cloud and rainwater in a background marine environment under influence of different air masses, *J. Atmos. Chem.*, DOI 10.1007/s10874-009-9125-6, 2009.
- Allan, J., D. Baumgardner, G.B. Raga, **O. L. Mayol-Bracero**, F. Morales, F. García, G. Montero-Martínez, S. Borrmann, J. Schneider, S. Mertes, S. Walter, M. Gysel, U. Dusek, G. Frank, M. Kraemer, Clouds and aerosols in Puerto Rico—a new evaluation, *Atmos. Chem. Phys.*, 8, 1293-1309, 2008.

### Accomplishment Relevant to NSF Review Criteria.

**Intellectual Merit.** As led PI of the PRADACS (2009-2012) and the PRACS RICO (2004-2007) NSF projects, Mayol-Bracero is contributing to “closing the gap” in understanding the potential impacts of aerosols, particularly, African Dust, on the Caribbean region, demonstrating how these aerosols impact cloud properties in a tropical montane cloud forest and the potential consequences for precipitation. This is having an impact on predictions of aerosol/climate interactions and the capability of climate models to simulate the influence of these aerosols on the radiative balance of the Earth’s atmosphere.

**Broader impacts.** Underrepresented students have interacted with scientists and state-of-the-art instrumentation and have been exposed to unique research opportunities. The regional capacity to cope with aerosols and climate change is being strengthened. Results from projects have been used in educational materials for students. The *Program of Intensive Short Courses in Atmospheric Sciences*, led by Mayol-Bracero, where CoPIs/collaborators offer short courses at the University of Puerto Rico-Río Piedras (UPR-RP), as well as the exchange of students among participating institutions is compensating for the non-existent curricula in atmospheric sciences at the UPR-RP.