

Anne MONOD

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Education : **2003** : Habilitation diploma – « A novel approach of the impact of organic compounds towards the oxidizing capacity of the atmosphere: multiphase interactions » - Director : Henri Wortham - University of Provence / **1997** : Ph-D in Sciences – Chemistry of the atmospheric pollution and physics of the environment – « Tropospheric reactivity of oxygenated organic compounds in the aqueous phase: experimental study and model » - Director : Patrick Carlier - University Paris 7 - Denis Diderot / **1993** : Master in Sciences - Chemistry of the atmospheric pollution and physics of the environment - University Grenoble 1 - Joseph Fourier / **1993** : Engineering Diploma of the “Ecole Nationale Supérieure d'Electrochimie et d'Electrometallurgie de Grenoble” (ENSEEG) at the National Polytechnic Institut of Grenoble (INPG).

Professional experience: **2011** : Full Professor in Atmospheric Chemistry at the Chemistry Department of the Aix-Marseille University / **1999** : Assistant Professor at the environmental department of the University of Provence – Marseille

Research Interest – Synopsis: A. Monod was hired in 1998 at the University of Provence to create a new group at the laboratory of environmental chemistry to develop research activities on atmospheric chemistry. A. Monod is now the head of the group that is composed of 5 permanent researchers, 3 engineers and a dozen of PhD and post-doc, whose activities are dedicated to multiphase and heterogeneous processes of organic compounds in the atmosphere including both field measurements and laboratory photochemical reactivity studies. A. Monod has been the principal investigator of 13 national and international projects. Her recent studies have shown that aqueous phase photochemical reactivity of organic compounds lead to the formation of macromolecules that can be a significant source of secondary organic aerosol in the atmosphere. Her work on multiphase and heterogeneous photochemistry of organic compounds has provided 53 peer-reviewed articles and 117 communications at conferences and 16 invited conferences.

Awards and fellowships: **2013:** CIRES (Cooperative Institute for Research In Environmental Sciences) fellowship as visiting professor at the university of Colorado, Boulder / **2013:** CRCT from the Aix-Marseille University / **2002-2005:** CNRS “délégation” research fellowship at Laboratory of Environmental Chemistry of the University of Provence / **1997-1998:** French foreign ministry Lavoisier fellowship for a one year post-doctoral work in the group of Professor F.S. Rowland, University of California, Irvine / **1996-1997:** University scholarship for one year research and teaching at the chemistry department of the University Paris 7 - Denis Diderot / **summer 1992:** Research Fellowship for undergraduate research training in the group of Professor F.S. Rowland, University of California, Irvine.

Synergistic Activities and Services (selected): **Since 2018:** head of the group “instrumentation and reactivity in the Atmosphere” / **2016 – 2021:** Member (nominated) of the national scientific council of CNRS / **since 2011:** organizer of seminars at LCE / **2011-2018:** member 7 scientific committees for the recruitment of researchers

Five Most Relevant Publications:

1. Giorio C.*, Brégonzio-Rozier L.*, Cazaunau M., Temime-Roussel B., DeWitt H.L., Gratien A., Michoud V., Panguì E., Ravier S., Zielinski A.T., Tapparo A., Vermeylen R., Claeys M., Voisin D., Kalberer M., Doussin J.F., Monod A. **Cloud processing of secondary organic aerosol from isoprene and methacrolein photooxidation.** Virtual Special Issue in honor of Veronica Vaida. *J. Phys. Chem. A*, 121 (40), 7641–7654, 2017
2. Reed Harris A.E.*, Ervens B., Shoemaker R.K., Kroll J.A., Rapf R.J., Griffith E.C., Monod A., Vaida V. **Photochemical Kinetics of Pyruvic Acid in Aqueous Solution.** *J. Phys. Chem. A*, 118, 8505–8516, 2014
3. Hallquist M., Wenger J.C., Baltensperger U., Rudich Y., Simpson D., Claeys M., Dommen J., Donahue N.M., George C., Goldstein A.H., Hamilton J.F., Herrmann H., Hoffmann T., Iinuma Y., Jang M., Jenkin M., Jimenez J.L., Kiendler-Scharr A., Maenhaut W., McFiggans G., Mentell Th.F., Monod A., Prevot A.S.H., Seinfeld J.H.,

Surratt J.D., Szmigielski R., Wildt J. **The formation, properties and impact of secondary organic aerosol: current and emerging issues.** *Atmospheric Chemical Physics*, 9, 5155–5236, 2009

4. Renard, P.*, Siekmann, F.*, Gandolfo, A.*, Socorro, J.*, Salque, G.*, Ravier, S., Quivet, E., Clément J.-L., Traikia, M., Delort, A.-M., Voisin, D., Thissen, R., and Monod, A.: **Radical mechanisms of methyl vinyl ketone oligomerization through aqueous phase OH-oxidation: on the paradoxical role of dissolved molecular oxygen**, *Atmospheric Chemical Physics*, 13, 6473-6491, 2013

5. Doussin J. F. and Monod A.: **Structure-activity relationship for the estimation of OH-oxidation rate constants of carbonyl compounds in the aqueous phase**, *Atmospheric Chemical Physics*, 13, 11625–11641, 2013

Graduate Students Advised:

Student name	PhD short title	Defense date
Maud Leriche	Development of the M2C2 model (Model of Multiphase Cloud Chemistry)	Dec. 8 th , 2000
Brice Temime	Développement et étalonnage d'un système de prélèvement pour les composés organiques semi-volatils atmosphériques	12 Novembre 2002
Laurent Deguillaume	The role of transition metals on cloud physics and chemistry	Dec. 19 th , 2003
Stéphanie François	Atmospheric behavior of carbonyls and hydroperoxides	June 2 nd , 2004
Emmanuel Chevallier	multiphase photochemistry of hydroperoxides	July 19 th , 2004
Laurent Poulain	Tropospheric photooxidation of oxygenated organic compounds in the aqueous phase	July 11 th , 2005
Gregory Eyglunet	development and use of a Thermal Desorption Atmospheric Pressure Ionization Aerosol Mass Spectrometer	Jan. 29 th , 2007
Maryline Pflieger	heterogeneous photooxidation of pesticides	June 12 th , 2009
Yao Liu	impact of aqueous phase photooxidation of isoprene oxidation products on the formation of secondary organic aerosol	Feb. 25 th , 2011
Shaoliang Zhang	photooxidation of organic iodide compounds under simulated conditions of a major nuclear power plant accident	June 29 th , 2012
Ehgere Abidi	Sources des aérosols en milieu urbain : cas de la ville de Paris	18 décembre 2013
Pascal Renard	Photochimie et oligomérisation des composés organiques biogéniques en phase aqueuse atmosphérique	25 novembre 2014
Majda Mekic	Étude de la formation et de la composition d'oxydes d'iode (IxOyHz) dans l'atmosphère	-
Juan Miguel González Sánchez	Multiphase reactivity of polyfunctional organic nitrates in the atmosphere: MULTI-NITRATES	-

Collaborations during the last four years (selected):

1. National collaborations (France): Dr. Roland Thissen, and Pr. Didier Voisin (University Joseph Fourier at Grenoble); Dr. Anne-Marie Delort, Dr. Nadine Chaumerliac and Dr. Laurent Deguillaume (University Blaise Pascal at Clermont Ferrand); Pr. Jean-François Doussin, Dr Paola Formenti and Pr. Bénédicte Picquet-Varrault (University of Paris 12); Dr. Maud Leriche (University Paul Sabatier at Toulouse).

2. International collaborations : Pr. Veronica Vaida (University Colorado, USA) ; Pr. Pierre Herckes (Arizona State University); Pr. Hartmut Herrmann (IFT, Leipzig, Germany) ; Dr. Barbara Ervens (NOAA, USA); Dr. Chiara Giorio (University Padova, Italy)