

Scientific Curriculum Vitae

Barbara D'Anna

Professional Information

Academic degrees : Dr. Rer. Nat., Tesi di Laurea
Current position : Research Director (DR2) CNRS
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A/ Education and Academic Career

Research Director at the Centre National de la Recherche Scientifique, CNRS (2015) ; • Researcher (CR1) at IRCELYON CNRS (2006) ; • Habilitation (HDR: Habilitation à Diriger des Recherches) – Physical Chemistry_University Claude Bernard - Lyon 1 (2011) ; • Post-Doc at the , LACE/CNRS, Lyon, France ; • Post-Doc , U. California Irvine, USA (2005); • Post-Doc , QUT, Brisbane, Australia (2004) ; • Post-Doc, University of Oslo, Norway, (2002-2004) ; • Doctorate Degree in Natural Sciences (Atmospheric Chemistry), University of Oslo, Norway (with distinction) 2001.

Maternity leave in 2012.

B/Research Interests

Experimental Atmospheric Chemistry • Reactive Carbon in the Earth's Atmosphere (Emissions, Transport and Photochemical Transformation) • Particle metrology and reactivity • Indoor Air Chemistry • Mass Spectrometry

C/International Experience and Collaborations since 2006

Visiting Scientist : European Photoreactor (EUPHORE), Mediterranean Center for Environmental Studies - Centro de Estudios Ambientales del Mediterraneo (CEAM), Valencia (E); • Institute for Atmospheric Chemistry, Leipzig,(G); Prof. H. Hermann; • University of Oslo, Norway (N) - Prof. C. J. Nielsen and Prof. A. Wisthaler; • University of Toronto, Canada - Prof. D. J. Donaldson; • Laboratory of Atmospheric Chemistry, Paul-Scherrer Institute, Villigen (CH), Prof. Markus Ammann ; • Norwegian Institute for Air Research (NILU)- Norway (N); Dr. Matthias Karl ; • Queensland University of Technology (QUT), Brisbane, Australia, Prof. Z. Ristovski et Prof. L. Morawska ; • IPEV, Institut polaire français Paul-Emil Victor.

Field campaigns : Pollution in the ARctic System - (PARCS- Chantier Arctique), mesocosm studies in Svalbard, Norway, 2017; • The Aerosol Direct Radiative Impact on the regional climate in the MEDiterranean region (ANR-ADRIMED), Lampedusa, Italy 2014 ; • Sources of marine Aerosol particles in the Mediterranean atmosphere (ANR-SAM), Mesocosms experiment at the Marine Station, STARESO, Corse, 2013; • Evolution of particle matter : Effect of after treatment devices and impact of DPF regeneration on the formation of SOA (ADEME-CAPPNOR 2) 2015 ; • Vehicle Emission Studies (Particle Matter characterisation for Euro 5 Vehicles matter (Diesel and Gasoline) CAPPNOR 1 - CORTEA ADEME , 2013 ; • Hill Cap Cloud Thuringia Campaign, Thuringia, Germany 2010; • Household products using and indoor air quality: emission, reactivity and by-products (ADOQ-Primequal), 2011 ; • Atmospheric Degradation of Amines (ADA) in Euphore Reactor Chamber Valencia, Spain, 2010-2011; • Organic Fraction of urban aerosol : methodology for source apportionnement (FORMES - Primequal) Marseille 2008 and Grenoble 2009, France ; • Niveaux,

déterminants et variabilités des nanoparticules dans l'environnement intérieur, (NANOP- Primequal), Paris, 2008, France.

C/ Publications

•70 publications (+2 submitted) in peer-reviewed journals (h-index: 29; 1953 citations: March 28, 2017) •16 book chapters / official reports •10 invited talks at international conferences •+140 presentations at conferences, symposia and workshops (Web of Science, March 28, 2017)

D/Funding ID

• 13 funded projects at the CNRS (since 2006, PI: 10, coordinator 3: over 1.9 Mio. EUR in total);

E/Patent

G. Blanchard, S. Rousseau, L. Mazri, L. Lizarraga, A. Giroir-Fendler, B. D'Anna, P. Vernoux, "Filtre à particules comprenant une phase catalytique", French Patent, N° FR104098 déposée le 12.02.2010

F/ Awards: Excellence Research Awards CNRS 2011 and 2015;

G/Students Supervision: 9 PhDs, 6 Master Students, 9 post-doc since 2006 ; •

H/Teaching : Photochemistry lectures, Air Quality, M2 SOAC, Univ. Lyon, 2017 Atmospheric Chemistry lectures from 2006-2016, M2 Department of Physics.

I/ Professional Service and Memberships

Group Leader at IRCELYON-CNRS, 35 people, 2015-2017 ; • Responsible for a CNRS National instrument an Aerosol mass Spectrometer (2007 - 2016) ; • Member of the CNRS-INSU commission Ocean and Atmosphere since 2014 ; • Member of a the "group de travail" Soot since 2014 ; •Organization of 3 international (ACS meeting, Denver, 2015 ; 4th Sino-French Joint Workshop on Atmospheric Environment Changing complexity of air pollution, Lyon, 2014 ; Aerosols - Properties, Processes and Climate (APPC), Slovenia, 2007) and 3 national (Colloque Groupe Français de Cinétique et Photochimie, 2014 ; Colloque INSU - Annecy 1^{er}, France, 2013 ; Les aérosols atmosphériques : enjeux pour la physico-chimie de l'atmosphère et le climat, Colloque CNFGG, 2014) • 1 summer school (Summer School on Soot particles, Aussois, 2017); • Expertise for European Science Foundation, Agence Nationale de Recherche (ANR), Norsk Forknisgraadet

I/ Five selected publications among 70 published (3 PNAS, 2 Chem. Rev.)

1. Eichler, P., M. Müller, B. D'Anna, and A. Wisthaler, A novel inlet system for online chemical analysis of semi-volatile submicron particulate matter, *Atmospheric Measurement Techniques*, 8(3), 1353-1360, 2015.
2. Y. Dupart, S. M. King, B. Nekat, A. Nowak, A. Wiedensohler, H. Herrmann, G. David, B. Thomas, A. Miffre, P. Rairoux, B. D'Anna, C. George, Mineral dust photochemistry induces nucleation events in the presence of SO₂, *PNAS*, 109(18), 6840-6844, 2012.
3. ME Monge, B. D'Anna, L. Mazri, A. Giroir-Fendler, M. Ammann, D. J. Donaldson, and C. George Light changes the atmospheric reactivity of soot, *PNAS*, 107, 15, 6605-6609, 2010.
4. El Haddad, B. D'Anna, B. Temime-Roussel, M. Nicolas, A. Boreave, O. Favez, D. Voisin, J. Sciare, C. George, J.-L. Jaffrezo, H. Wortham, and N. Marchand. Towards a better understanding of the origins, chemical composition and aging of oxygenated organic aerosols: case study of a Mediterranean industrialized environment, *Marseille, Atmos. Chem. Phys.*, 13, 7875–7894, 2013; doi:10.5194/acp-13-7875-2013.
5. ME Monge, T. Rosenørn, O. Favez, M. Müller, G. Adler, A-A Riziq, Y. Rudich, H. Herrmann, C. George and B. D'Anna, Alternative pathway for atmospheric particles growth, *PNAS*, 109 (18) 6840-6844, 2012.