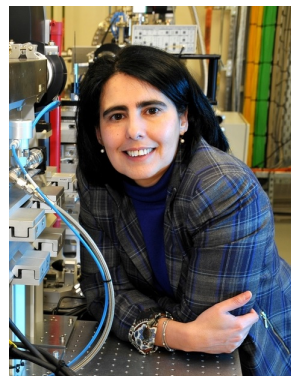


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PERSONAL PROFILE

Science Group Leader for Spectroscopy at Diamond Light Source (DLS), with primary scientific interests focused on understanding the relationship between the local structure of solutions and complex materials to their chemical, physical or biochemical properties, using advanced synchrotron X-ray and neutron scattering methods. Regular user of conventional XAS, in both scanning and dispersive configurations, as well as photon in/photon out spectroscopies. A strong advocate of widening researcher access to state-of-the-art analytical tools, she is a founding member of the CONEXS network, COllaborative NEtwork for X-ray Spectroscopy, that aims to extend the use of DFT methods to XAS analysis in the UK and international user community.

EMPLOYMENT HISTORY

**Feb 2018 –
present**

Science Group Leader for the Spectroscopy Group, Diamond Light Source (UK)

Responsible for the strategic scientific and technical development of the unit of four spectroscopy beamlines: the *microfocus spectroscopy* beamline (I18), the *core EXAFS* beamline (B18), and the two branches that form the *versatile X-ray absorption spectroscopy* beamline, ultra-dilute and emission spectroscopy (I20-Scanning) and Energy Dispersive EXAFS (I20-EDE).

**April 2005 –
Jun 2018**

Principal Beamline Scientist, Diamond Light Source (UK)

Project lead for the design, build, commissioning and operation of the two branches of the Versatile Spectroscopy beamline: I20-Scanning and I20-EDE. The three main techniques that form the core of this novel beamline design are (i) ultra-dilute X-ray absorption spectroscopy, (ii) energy dispersive X-ray absorption spectroscopy and (iii) photon in/photon out techniques: X-ray Emission Spectroscopy (XES), Resonant X-ray Emission Spectroscopy (RXES) and HERFD-XANES.

**Dec 2003 –
March 2005**

Beamline Scientist, Diamond Light Source (UK)

Responsible for the design of the experimental end-station of the Microfocus XAS beamline, I18, and its integration with the precision characteristics of the beamline optics.

**Sep 2000 –
Dec 2003**

Beamline Scientist, European Synchrotron Radiation Facility (ESRF)

Responsible for the support of the Energy Dispersive X-ray Absorption Spectroscopy beamline, ID24, and its user community for experiments in the area of chemical science.

**Sep 1998 –
Sep 2000**

Post Doctoral Research Associate, European Synchrotron Radiation Facility (ESRF)

Research focussed on the investigation of in-solution chemical reaction kinetics occurring at the millisecond time scale from the viewpoint of local atomic and molecular structure and associated electronic states, using X-ray Absorption Spectroscopy and neutron scattering.

EDUCATION AND QUALIFICATIONS

- 1994 – 1998** **Department of Inorganic Chemistry, Faculty of Chemistry, University of Seville (Spain)**
European PhD. in Chemistry on the study of the structure of metallic complexes in solution by X-ray absorption spectroscopies under the supervision of Prof Adela Muñoz-Paez.
- 1989 – 1994** **Faculty of Chemistry, University of Seville (Spain)**
University Degree studies in chemistry.

PROFESSIONAL MEMBERSHIPS AND OTHER POSITIONS

- 2019 –** • Assessor for the Australian Research Council
- 2015 –** • Member of the Executive Committee for the International X-ray Absorption Society (IXAS)
- 2014 –** • Member, secretary (2017), then chair (2021) of the Commission on XAFS for the IUCr (Internacional Union of Crystallography)
- 2012 –** • Review Panel Member for the X-ray Absorption Spectroscopy beamlines at Spring-8 (Japan), Alba (Spain) and SESAME (Jordan).

SELECTED CONFERENCES, WORKSHOPS AND MEETINGS ORGANIZED FROM >10

- Co-organizer of the Micro-symposium 'XAFS Studies in Biology Coupled to Crystallography', XXII Congress and General Assembly of the IUCr, Madrid, Spain, August 2011.
- Organizer of the 'International Workshop on Improving Data Quality in XAFS Spectroscopy 2017, Q2XAFS2017', Diamond Light Source, U.K., August 2017.
- Co-organizer of the CONEXS Summer School 2019 (Newcastle, UK), 2021 (on-line event) and 2022 (Newcastle, UK) and CONEXS International Conference 2020 (Newcastle, UK), 2021 (on-line event) and 2022 (Newcastle, UK).
- Co-organizer of the Micro-symposium '4th generation SR and XFEL Facilities', XXV Congress and General Assembly of the IUCr, Prague, Czech Republic, August 2020.

CUMULATIVE SCIENTIFIC OUTPUT

Over 50 talks, seminars and invited presentations over the last 25 years.

Over 90 peer reviewed papers including book chapters, journal articles and peer reviewed conference articles. ORCID number is 0000-0001-7616-6515. Total citations 1962 (Goggle Scholar, June 2022), of which more than a third are in the last five years. h-index 25, i10-index 51.

Illustrative publications

- **Ab Initio X-ray Absorption Spectroscopy Study of the Solvation Structure of Th(IV), U(IV), and Np(IV) in Aqueous Solution.** J. Chaboy and S. Diaz-Moreno, *J. Phys. Chem. A*, **115**, p. 2345-2349 (2011).
- **Using synchrotron X-ray and neutron methods to investigate structural aspects of metal ion solvation and solution structure: An approach using empirical potential structure refinement.** D.T. Bowron and S. Diaz-Moreno, *Coord. Chem. Rev.* **277–278** (2014) 2–14.
- **The Spectroscopy Village at Diamond Light Source.** S. Diaz-Moreno, M. Amboage, M. Basham, R. Boada, N. E. Bricknell, G. Cibir, T. M. Cobb, J. Filik, A. Freeman, K. Geraki, D. Gianolio, S. Hayama, K. Ignatyev, L. Keenan, I. Mikulska, J. F. W. Mosselmans, J. J. Mudd, S. A. Parry, *Journal of Synchrotron Radiation*, **25**, 998 (2018).
- **Photon-in/Photon-out Spectroscopy at the I20-Scanning beamline at Diamond Light Source.** Shusaku Hayama, Roberto Boada, Jesús Chaboy, Adrian Birt, Graham Duller, Leo Cahill, Adam Freeman, Monica Amboage, Luke Keenan and Sofia Diaz-Moreno. *J. Phys.: Condens. Matter*, **33**, 284003 (2021)
- **Unraveling the Molecular Details of the “Gate Opening” Phenomenon in ZIF-8 with X-ray Absorption Spectroscopy.** Roberto Boada, Jesús Chaboy, Shusaku Hayama, Luke L. Keenan, Adam A. Freeman, Mónica Amboage and Sofía Díaz-Moreno. *The Journal of Physical Chemistry C*, **126**, 13, 5935-5943 (2022).