

Dr. Rocco Caliandro, PhD

Bibliometric parameters (September 2023):

h-index: 30 (Scopus)

overall number of citations: more than 7466 (Scopus)

publications: 164 papers: 136 articles, 19 conference papers, 6 reviews, 1 book chapter, 1 editorial, 1 erratum

Scopus Author ID:7003989918

<http://orcid.org/0000-0002-0368-4925>

website: <http://users.ba.cnr.it/ic/crisrc25>

Dr Rocco Caliandro got the degree in Physics from the University of Bari (Italy) in 1993. After a year of mandatory military service, in 1995 he worked as post-degree fellowship at the Institute for the Research and Development of Crystallographic Methodologies of the National Research Council (CNR). In 1996 he joined the PhD program of the Department of Physics at the University of Bari. During his PhD he carried out researches in high-energy physics, participating to several heavy-ion collisions experiments at the European Organization for Nuclear Research (CERN) of Geneva. In 1999 he got the PhD in Physics. He prosecuted his research in high-energy physics during his permanence at CERN from February to May 1999, during a two years post-doctoral fellowship for experimental physicists from the National Institute of Nuclear Physics (INFN), and during a fixed-term contract from the University of Bari for the research project "Search for the Quark-Gluon Plasma". In December 2001 he became permanent employee as researcher of the Institute of Crystallography of CNR.

He got the national academic qualification to associate professor in Molecular Biology (05/E2), in 2014 and in Applied Physics (02/D1) in 2020.

He taught Physics (as course holder) at several degree courses of the Polytechnic of Bari, from 2012 to 2015, and at the course of Natural Sciences of the Department of Biology of the University of Bari in 2016. He was teaching assistant in Physics of the Polytechnic of Bari in 1995/96, 1996/97 and 2000/01.

He teaches Protein Crystallography at the degree course of Medical Biotechnology of the University of Bari, starting from 2013. He taught Crystallography at the European School of Medicinal Chemistry in 2012, at the school "Crystallography beyond diffraction", organized by the Italian Crystallographic Association in 2013 and at the 4th European Crystallography School in 2017. He was lecturer at the Crystallographic School "From Gene to Protein Crystal Structure", held online from 22 to 25 September 2020.

He has been advisor of two PhD students and five degree students.

He was appointed in the triad of suitable candidates for the direction of the Institute of Crystallography of the CNR (prot. n 0074743 of 23/11/2020- call n.390.365).

He won a selective procedure for a salary upgrade for CNR researchers (call CNR n.364.174 in 2019);

a prize for researchers and technologists of the CNR in 2005 for having achieved excellence and innovation performance of particular strategic importance, recognized by the President of CNR;

two poster prizes at the Conference of the Department of Chemical Sciences and Materials Technologies of CNR, held in Bressanone (28-30 October 2019), and at the "2011 Meeting of the Swiss Crystallographic Association, held in Bern (16 September 2012).

He is member of the board of the Institute of Crystallography and of the Biological Macromolecular Section of the Italian Crystallographic Association.

He is editor-in-chief of Applied Physics Research, section board member of Crystals, Advisory board member of Sci, Editorial board Member of Solids and PhysChem. He edited three special issues of Crystals.

He has been reviewer for the Italian Scientific Evaluation ANVUR: member of GEV 5 (Biological Sciences) board for the call VQR 2015-2019 and reviewer of four articles for the call VQR 2011-2014.

He is scientific evaluator appointed by the CNR for three projects for the call MISE Horizon 2020 - PON 2014/2020 (starting from 2016).

He reviewed research projects for:

the Latvian Council of Science (LCS) (reviewer and rapporteur of two projects, in 2021)

the Czech Science Foundation (GAČR) (five projects, from 2018 to 2020)

the Central Finance Contracting Agency (CFCA) of Latvia (in 2020).
the Research Foundation – Flanders (FWO) (in 2019)
the call "Beyond Borders" of the University of Rome Tor Vergata (in 2019)
for the call HTSM2017 of the Netherlands Organization for Scientific Research (NWO) (in 2017)
the call JESH of the Austrian Academy of Sciences (ÖAW) (in 2016)
the PISCOPIA Fellowship Programme of the University of Padua (in 2013)

Periods of study and research abroad (last 10 years):

- visiting scientist at the California University of San Francisco, USA, February 3-24 2020, to carry out protein structural investigations by Bragg and diffuse X-ray scattering, guest of Prof. James Fraser.
- visiting scientist at the Kyungpook National University, Daegu, South Korea, October 16-November 4 2016 and November 19-December 7 2017, to carry out crystal structure determination of epigenetic targets, guest of Prof. Eric di Luccio.
- visiting scientist at the Medical Research Centre of the Polish Academy of Sciences, Warsaw, Poland, November 28-December 11 and November 2-9 2014, to develop algorithms for structural characterization of protein dynamics from simulated data, guest of Prof. Bogdan Lesyng.
- visiting scientist at the National Synchrotron Light Source II of the Brookhaven National Laboratory (Brookhaven, New York state, USA), July 17-August 8 2014 and July 5-25 2016, to carry out experiments and data analysis on modulated enhanced diffraction, guest of Dr. Eric Dorhyee.
- visiting scientist at German Research School for Simulation Sciences of Julich, carried out 28 August-4 September 2012, to carry out research activities on Computational Biophysics, guest of Prof. Paolo Carloni.

Grants Awarded (last 10 years)

- | | |
|-----------|--|
| 2021-2023 | “Sviluppo di alimenti funzionali per l’innovazione dei prodotti alimentari di tradizione italiana - ALIFUN” Industrial Research Project of National Interest (ARS01_00783). Responsible for the CNR unit (46,000€). |
| 2019-2022 | Project “The inorganic side of lysosome cell biology: the network of metal-protein interactions” research project of National Relevance (PRIN) of the Italian Ministry of Education, Universities and Research (Prot. 2017WBZFHL). Responsible for the CNR unit (116,000€). |
| 2016-2020 | Project “Revolutionising Downstream Processing of Monoclonal Antibodies by Continuous Template-Assisted Membrane Crystallization — AMECRYS” of the HORIZON 2020-FETOPEN-2014-2015-RIA programme (grant agreement n. 712965). Responsible for the CNR unit (200,674€). |
| 2015-2017 | Collaborative project “Static and dynamic crystallographic investigations for developing specific and selective inhibitors for the epigenetic therapy of cancers”, funded within the scientific cooperation agreement between the CNR and the National Research Foundation of Korea. Responsible for the Italian activities (20,000€). |
| 2013-2015 | Project “Promozione di Processi ECO_sostenibili per la valorizzazione delle Produzioni agroalimentari Pugliesi - ECO_P4” of the Programma Operativo Nazionale per la Ricerca e la Competitività 2007-2013 (n. 713/Ric. of the 29/10/2010). Responsible for the CNR unit (41,000€). |
| 2014-2016 | Collaborative project “New algorithms for protein dynamics studies and their applications to protein crystallography”, funded within the scientific cooperation agreement between the CNR and the Polish Academy of Sciences. Responsible for the Italian activities. |
| 2014-2014 | XRD analysis on wine leaves samples, conducted within a sub-contract between the Department of Civil, Environmental, Territorial, Architectural and Chemical Engineering of the Polytechnic of Bari and the Institute of Crystallography of CNR, prot.5059 del 27/11/2013. Responsible for the activities (5,500€). |

Patent: Process for the production of nanocrystals of metal chalcogenides, Italian patent application n. 102022000001577.

Invited talks (last 10 years):

- “Structural basis of metal ion trafficking in lysosome“ 3rd International Online Conference on Crystals (15-30 January 2022).
- “Multivariate analysis of X-ray diffraction and XAFS data“ XXV General Assembly and Congress of the International Union of Crystallography, Prague (14-22 August 2021).
- “Protein crystallization in hydrogel composite membranes and deep eutectic solvents “Fifth Meeting of the Italian and Spanish Crystallographic Associations”, Naples (4-7 September 2019).
- “Enzymes and advanced materials for active food packaging” at the 3rd International Conference on Food & Beverage Packaging, Roma. (16-18 July 2018).
- “New methods and applications for in situ characterization of structural dynamics“, 3rd Joint AIC-SILS Conference, Rome (25-28 June 2018).
- “Structural Dynamics by Modulated Enhanced Diffraction” at the Matter-Radiation Interactions in Extremes (MaRIE) workshop, Santa Fe, USA (25-27 July 2016).
- “Methods for extracting and combining information from different datasets“29th European Crystallographic Meeting, Rovinj, Croatia (23-28 August 2015).
- “Modulation enhanced diffraction: theory and applications” at the Annual meeting of the American Crystallographic Association, held in Honolulu, Hawaii, (20-24 July 2013).
- “Data Analysis by Modulation Enhanced Diffraction (MED)” at the workshop on advanced analysis of X-ray and neutron scattering data: getting from data to science, held at the Brookhaven National Laboratory (14-15 August 2013).
- “Selective structural investigation by MED” at the NSLS-II First-Experiments Workshop, held at the Brookhaven National Laboratory (12-13 August 2013).

He was invited to give seminars to several Universities and Research Centers.