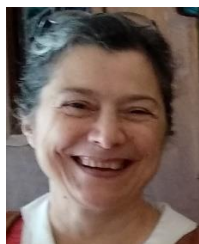


LUISA BARBA CURRICULUM VITAE

PERSONAL INFORMATION



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🌐 [State personal website\(s\)](#)

Sex f | Date of birth 15/08/1963 | Nationality Italian

WORK EXPERIENCE

01.09.2001- present day: CNR contract, role: researcher III band

Name and address of employer:	CNR (Institute of Crystallography) c/o Area Science Park, SS14 Km 163.5 I-34149 Basovizza (TS) Italy
Type of business or sector	Public Research
Occupation or position held	Researcher III band
Main activities and responsibilities	Participation in development and management of the Experimental Station of the XRD1 Beamline at ELETTRA as a member of the research group of the Beamline, with particular emphasis on Grazing Incidence Diffraction experiments and Soft Matter characterization. Assistance and/or participation in the experiments in synchrotron light at the Beamline. Collaborations with other research groups, both within the CNR and other institutions and research bodies. Since 2015, responsible for the CNR of XRD1 beamline experimental station.

03.02.1997 - 31.08.2001: CNR contract, fixed

Name and address of employer	CNR (Institute of Structural Chemistry) c/o Area Science Park, SS14 Km 163.5 I-34149 Basovizza (TS) Italy
Type of business or sector	Public Research
Occupation or position held	Researcher III band
Main activities and responsibilities	Participation in development and management of the Experimental Station of the XRD1 Beamline at ELETTRA as a member of the research group of the Beamline, with particular emphasis on Multiwavelength Anomalous Diffraction experiments. Assistance and/or participation in the experiments in synchrotron light at the Beamline. Collaborations with other research groups, both within the CNR and other institutions and research bodies.

01.06.1993 - 31.01.1997: CNR scholarships

Name and address of employer	CNR (Institute of Structural Chemistry) c/o Area Science Park, SS14 Km 163.5 I-34149 Basovizza (TS) Italy
Type of business or sector	Public Research
Occupation or position held	Grant recipient
Main activities and responsibilities	Participation in development and management of the Experimental Station of the XRD1 Beamline at ELETTRA as a member of the research group of the Beamline, with particular emphasis on the setup of Single Crystal Diffraction experiments. Assistance and/or participation in the experiments in synchrotron light at the Beamline. Collaborations with other research groups, both within the CNR and in other institutions and research bodies.

01.04.1992 - 31.05.1993: Coordinated Continuative Collaboration Contracts

Name and address of employer	Sincrotrone Trieste S.c.p.A c/o Area Science Park, Padriciano 99, 34149 Trieste
Type of business or sector	Public Research
Occupation or position held	Researcher
Main activities and responsibilities	Set up of a conventional crystallographic station at the Hard X-ray Optics Laboratory of "Sincrotrone Trieste" S.c.p.A. X-Ray Diffractometry from conventional source and structural characterization of organometallic

compounds. Participation in mounting and commissioning of XRD1 Beamline at ELETTRA and of its Experimental Station.

EDUCATION AND TRAINING

Physics

Name and type of organisation providing education and training
Principal subjects
Title of qualification awarded

University of Rome "La Sapienza"
Physics of Condensed Matter
Laurea diploma

RESEARCH ACTIVITIES

Research sectors: Synchrotron X-Ray Diffraction experiments from single crystal, powders and thin films. Grazing Incidence X-Ray Diffraction. Phase transition characterization as a function of non-ambient conditions. Structural characterization.

RECENT SCIENTIFIC ACTIVITIES.

- Structural studies of high temperature superconductors correlated with thermally induced phase transitions
- Structural studies of organic semiconductors correlated with conversion and transfer properties
- Structural studies of polymer/oligomer systems deposited onto self-assembled monolayers to assess crystalline quality and size.
- Characterization of lipid phase crystallization behavior.
- Characterization of functionalized food lipid phase crystallization behavior.

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s) English (c1)

Digital skills Advanced

SCOPUS H-INDEX. 25
RESEARCHERID: D-3162-2012
SCOPUS AUTHOR ID: 7003988007
ORCID ID: 0000-0001-8832-7056

LAST 3 YEARS PUBLICATIONS

- (1) Mazzola, F.; Chaluvadi, S. K.; Polewczyk, V.; Mondal, D.; Fujii, J.; Rajak, P.; Islam, M.; Ciancio, R.; Barba, L.; Fabrizio, M.; Rossi, G.; Orgiani, P.; Vobornik, I. Disentangling Structural and Electronic Properties in V2O3 Thin Films: A Genuine Nonsymmetry Breaking Mott Transition. *Nano Lett.* **2022**, 22 (14), 5990–5996. <https://doi.org/10.1021/acs.nanolett.2c02288>.
- (2) Holzer, V.; Schrode, B.; Simbrunner, J.; Hofer, S.; Barba, L.; Resel, R.; Werzer, O. Impact of Sample Misalignment on Grazing Incidence X-Ray Diffraction Patterns and the Resulting Unit Cell Determination. *Review of Scientific Instruments* **2022**, 93 (6), 063906. <https://doi.org/10.1063/5.0088176>.
- (3) Bhattarai, M.; Penttilä, P.; Barba, L.; Macias-Rodriguez, B.; Hietala, S.; Mikkonen, K. S.; Valoppi, F. Size-Dependent Filling Effect of Crystalline Celluloses in Structural Engineering of Composite Oleogels. *LWT* **2022**, 160, 113331. <https://doi.org/10.1016/j.lwt.2022.113331>.
- (4) Calabrese, G.; Pipitone, C.; Marini, D.; Giannici, F.; Martorana, A.; Barba, L.; Summonte, C.; Masciocchi, N.; Milita, S. Highly Stable Thin Films Based on Novel Hybrid 1D (PRSH)PbX3 Pseudo-Perovskites. *Nanomaterials* **2021**, 11 (10), 2765. <https://doi.org/10.3390/nano11102765>.
- (5)

- Vohra, V.; Matsunaga, Y.; Takada, T.; Kiyokawa, A.; Barba, L.; Porzio, W. Impact of the Electron Acceptor Nature on the Durability and Nanomorphological Stability of Bulk Heterojunction Active Layers for Organic Solar Cells. *Small* **2021**, *17* (2), 2004168. <https://doi.org/10.1002/sml.202004168>.
- (6)
- Mirco Abbinante, V.; García-Espejo, G.; Calabrese, G.; Milita, S.; Barba, L.; Marini, D.; Pipitone, C.; Giannici, F.; Guagliardi, A.; Masciocchi, N. Conformationally Rigid Molecular and Polymeric Naphthalene-Diimides Containing C 6 H 6 N 2 Constitutional Isomers. *Journal of Materials Chemistry C* **2021**, *9* (33), 10875–10888. <https://doi.org/10.1039/D1TC00564B>.
- (7)
- Calligaris, S.; Plazzotta, S.; Barba, L.; Manzocco, L. Design of Roll-In Margarine Analogous by Partial Drying of Monoglyceride-Structured Emulsions. *European Journal of Lipid Science and Technology* **2021**, *123* (3), 2000206. <https://doi.org/10.1002/ejlt.202000206>.
- (8)
- Boota, M.; Hussain, T.; Yang, L.; Bécuwe, M.; Porzio, W.; Barba, L.; Ahuja, R. Mechanistic Understanding of the Interactions and Pseudocapacitance of Multi-Electron Redox Organic Molecules Sandwiched between MXene Layers. *Advanced Electronic Materials* **2021**, *7* (4), 2001202. <https://doi.org/10.1002/aelm.202001202>.
- (9)
- Boota, M.; Chen, C.; Yang, L.; Kolesnikov, A. I.; Osti, N. C.; Porzio, W.; Barba, L.; Jiang, J. Probing Molecular Interactions at MXene–Organic Heterointerfaces. *Chem. Mater.* **2020**, *32* (18), 7884–7894. <https://doi.org/10.1021/acs.chemmater.0c02662>.
- (10)
- Valoppi, F.; Salmi, A.; Ratilainen, M.; Barba, L.; Puranen, T.; Tommiska, O.; Helander, P.; Heikkilä, J.; Haeggström, E. Controlling Oleogel Crystallization Using Ultrasonic Standing Waves. *Sci Rep* **2020**, *10* (1), 1–13. <https://doi.org/10.1038/s41598-020-71177-6>.
- (11)
- Masi, A.; Alvani, C.; Armenio, A. A.; Augieri, A.; Barba, L.; Campi, G.; Celentano, G.; Chita, G.; Fabbri, F.; Zignani, C. F.; Barbera, A. L.; Piperno, L.; Rizzo, F.; Rufoloni, A.; Silva, E.; Vannozzi, A.; Varsano, F. Fe(Se,Te) from Melting Routes: The Influence of Thermal Processing on Microstructure and Superconducting Properties. *Supercond. Sci. Technol.* **2020**, *33* (8), 084007. <https://doi.org/10.1088/1361-6668/ab9acf>.
- (12)
- Boota, M.; Urbankowski, P.; Porzio, W.; Barba, L.; Osti, N. C.; Bleuel, M.; Keum, J. K.; Mamontov, E. Understanding Functionalization of Titanium Carbide (MXene) with Quinones and Their Pseudocapacitance. *ACS Appl. Energy Mater.* **2020**, *3* (5), 4127–4133. <https://doi.org/10.1021/acsaem.0c00314>.
- (13)
- Latini, A.; Quaranta, S.; Menchini, F.; Lisi, N.; Girolamo, D. D.; Tarquini, O.; Colapietro, M.; Barba, L.; Demitri, N.; Cassetta, A. A Novel Water-Resistant and Thermally Stable Black Lead Halide Perovskite, Phenyl Viologen Lead Iodide C₂₂H₁₈N₂(PbI₃)₂. *Dalton Trans.* **2020**, *49* (8), 2616–2627. <https://doi.org/10.1039/C9DT04148F>.