

Prof. Marina Cabrini,

Graduated in Industrial Chemistry at the University of Milan in 1989, from 1989 to 1997 worked at Polytechnic of Milan in the research group of prof. Pietro Pedferri and prof. Alberto Cigada. In 1997 become Assistant Professor of Science and Technology of Materials at the Engineering Faculty of the University of Bergamo. Professor of Science and Technology of Materials at the Mechanical Engineering Faculty of the University of Bergamo since 2001. Her research activity is on electrochemistry and corrosion, primary focused on the environmental assisted cracking of traditional and innovative steels for the oil and gas industry. She made some researches on biomaterials, focused on the determination of ion release rate of titanium alloy anodically oxidized or covered by HA. Recently is working on evaluation of corrosion resistance of magnesium alloys with different environmental friendly coatings (research project in collaboration with the University of Roma Tor Vergata, co-financed by the INSTM and Lombardia Region). Other researches of Marina Cabrini are on electrochemical characterization of the kinetic of passivity film formation on rebar in concrete, on corrosion inhibitors for chloride contaminated concrete and on the corrosion evaluation of carbon steel in CCTS (Carbon Capture Transport and Storage). She is working on the corrosion behavior of aluminium and nickel alloys obtained by means of Direct Metal Laser Sintering in collaboration with Polytechnic of Turin and Centre for Sustainable Future of IIT of Turin, on the corrosion and stress corrosion cracking of aluminium alloys (AA7075 and AA 2024) welded by means of Friction Stir Welding in collaboration with the Mechanical Technologies group of the University of Bergamo.

Professional preparation and certifications:

1989: Graduated in Industrial Chemistry at University of Milan, Electrochemical and metallurgical curriculum;

1989-1991: Internship at Polytechnic of Milan Department of Applied Physical Chemistry and CNR (Italian National Council of Research) ITM (Institute for Metal Technology)

1991 – 1997: Graduated Technics at Polytechnic of Milan Department of Applied Physical Chemistry (Corrosion and Mechanical Laboratory)

1997 – 2001: Assistant Professor of Science and Technology of Materials at the Engineering Faculty of the University of Bergamo

2001 – nowadays: Professor of Science and Technology of Materials at the Mechanical Engineering Faculty of the University of Bergamo

2007 -2009: Italian delegate as supervisor at Academic Network Event of GERG (European Gas Research Group)

2011 – nowadays: Italian delegate in the Board of International Corrosion Council (ICC).

2016 – nowadays: Delegate for University of Bergamo at the Interuniversity Consortium CSGI

Current job position(s):

2003 – nowadays: Professor of the course “Metallic materials” for mechanical engineering;

2003 – nowadays: Professor of the course “Polymer, composites and ceramics” for mechanical engineering

2007 – 2012: Professor of the course “Corrosion and protection of material” for construction engineering;

2016 – nowadays: Professor of the course “Biomaterials” for Technology Engineering for Health; from 1990 has given lectures and seminars in post-graduated and specialization courses

2010: Professor of the course of “Electrochemistry and electrochemical test methods” in the PhD school of “Mechatronics and Innovative Technologies” of the University of Bergamo

2011: Professor of the course “Not traditional techniques to study environmental assisted cracking” at the 17° AIMAT School: Advantages in Materials and Biomaterials

2015 - nowadays: Professor of the course of “Electrochemistry and electrochemical test methods” in the PhD school of Engineering and Innovative Technologies of the University of Bergamo

2007: – nowadays: Coordinator of the Italian Association of Metallurgy (AIM) biannual course of “Corrosion and protection of metals”

2000 – nowadays: head of the Microstructural Analysis Laboratory of the University of Bergamo.

2009 – nowadays: head of the High Pressure and High Temperature Laboratory of the University of Bergamo

Awards:

1990: Snam S.p.A grant on “Near Neutral SCC and Hydrogen Cracking of metal”

1996: AIMAT awards for young researcher at the 3rd National Congress AIMAT (Napoli 25-27th September, 1996)

Collaboration in funded projects as co-investigator:

1997: PRIN Project “Monitoring technics of rebar corrosion in concrete and innovative restoration methods”, National Coordinator Prof. M.Colleparidi, Local Coordinator Prof. T. Pastore.

1999: PRIN Project “Corrosion Inhibitors for restoration of rebar in concrete”, National Coordinator Prof. P.Pedefferri, Local Coordinator Prof. T. Pastore.

2000: PRIN Project “Stress corrosion cracking of high strength steels for prestressed concrete”, National Coordinator Prof. L.Lazzari, Local Coordinator Prof. Tommaso Pastore.

2002: PRIN Project “Fatigue-Corrosion of high strength steels for deep seas offshore structures”, National Coordinator Prof. T. Pastore.

2006: Local Coordinator of the PRIN Project: “Design And Production Of Nanostructured Inorganic, Organic And Hybrid Scaffolds To Be Used In Regenerative Medicine As Substrates For Stem Cell Differentiation” (National Coordinator Prof. L. Montanaro) with the research title “Mechanical Characterization of Ceramic Scaffolds Obtained by Means of gel-casting”.

2010 – 2012: INSTM and Regione Lombardia Project: “RiCEL – Ceramic environmental friendly coatings on light alloys”, National Coordinator Prof. T.Pastore.

2003 – 2007: ENI funded “TAP – Project (High pressure transportation)” Research on “Environmental Assisted Cracking of X100 steel for long distance high pressure pipelines”.

1990-2012: Collaboration in funded project on Corrosion and materials with the main Italian Oil and Gas and Energy Company (ENI, Snam, Dalmine-Tenaris, SnamProgetti, Saipem, Enel, Enel Green Power).

2016 – nowadays: INSTM and Regione Lombardia Project: (AMCRA-Additive Manufacturing of Corrosion Resisting Alloy)

More relevant Publications

1. Cabrini M, Lorenzi S., Pastore T., Pellegrini S., Ambrosio E.P., Calignano F., Manfredi D., Pavese M., Fino P. (2016). Effect of heat treatment on corrosion resistance of DMLS AlSi10Mg alloy. **ELECTROCHIMICA ACTA (IF 4,8)**, vol. 206, p. 346-355
2. Cabrini, M., Lorenzi, S., Pastore, T., Pellegrini, S., Pavese, M., Fino, P., Ambrosio, E.P., Calignano, F., Manfredi, D., (2016) Corrosion resistance of direct metal laser sintering AlSiMg alloy, **SURFACE AND INTERFACE ANALYSIS (IF 1,018)**, 48 (8), pp. 818-826. **Cited 1 time.**
3. Cabrini Marina, Lorenzi Sergio, Pastore Tommaso, Pellegrini Simone, Manfredi Diego, Fino Paolo, Biamino Sara, Badini Claudio (2016). Evaluation of corrosion resistance of Al-10Si-Mg alloy obtained by means of Direct Metal Laser Sintering. **JOURNAL OF MATERIALS PROCESSING TECHNOLOGY (IF 2,359)**, vol. 231, p. 326-335, **3 citazioni**
4. Cabrini Marina, Lorenzi Sergio, Pellegrini Simone, Pastore Tommaso (2015). Environmentally assisted cracking and hydrogen diffusion in traditional and high-strength pipeline steels. **CORROSION REVIEWS (IF 1,450)**, 33 (6), pp. 529-545. **Cited 1 time.**

5. Cabrini Marina, Lorenzi Sergio, Pastore Tommaso (2014). Cyclic Voltammetry Evaluation Of Inhibitors for localised corrosion in alkaline solutions. **ELECTROCHIMICA ACTA (IF 4,8)**, vol. 124, p. 156-164, **Cited 10 times**.
6. Pastore, T., Cabrini, M., Coppola, L., Lorenzi, S., Marcassoli, P., Buoso, A. (2011) Evaluation of the corrosion inhibition of salts of organic acids in alkaline solutions and chloride contaminated concrete, **MATERIALS AND CORROSION (IF 1,329)**, 62 (2), pp. 187-195. **Cited 13 times**.
7. Cabrini, M., Lorenzi, S., Marcassoli, P., Pastore, T. (2011) Hydrogen embrittlement behavior of HSLA line pipe steel under cathodic protection, **CORROSION REVIEWS (IF 1,450)**, 29 (5-6), pp. 261-274. **Cited 10 times**
8. Razzini, G., Cabrini, M., Maffi, S., Mussati, G., Peraldo Bicelli, L. (1999) Photoelectrochemical visualization in real-time of hydrogen distribution in plastic regions of low-carbon steel, **CORROSION SCIENCE (IF 5,154)**, 41 (1), pp. 203-208. **Cited 19 times**.
9. Cabrini, M., Cigada, A., Rondelli, G., Vicentini, B., Effect of different surface finishing and of hydroxyapatite coatings on passive and corrosion current of Ti6Al4V alloy in simulated physiological solution (1997) **BIOMATERIALS (8,387)**, 18 (11), pp. 783-787. **Cited 64 times**
10. Cigada, A., Cabrini, M., Pedferri, P. (1992) Increasing of the corrosion resistance of the Ti6Al4V alloy by high thickness anodic oxidation, **JOURNAL OF MATERIALS SCIENCE: MATERIALS IN MEDICINE (IF 2,272)**, 3 (6), pp. 408-412. **Cited 84 times**.