

## Prof. Eng. Stefano Rossi PhD

**Email address:** Stefano.rossi@unibz.it

### PROFILE

Full professor of Materials Science and Engineering. Teacher of Product Design and Protection of Materials and Structures courses. The research took place in science and engineering of materials in particular considering the interaction between materials and environment. In particular, the corrosion behaviour and mechanical degradation of materials are considered. The methods to improve the surface properties were evaluated. The main topics are the following: - Study of the electrochemical behaviour of materials and their surfaces considering different treatments; - Study of surface treatments to improve surface characteristics, in particular considering the adhesion of organic coatings; - Protective properties (corrosion and degradation produced by mechanical action) and methods to improve the resistance properties: metallic, ceramic and organic coatings; - natural and accelerated weathering of materials surface; - The relationship between materials and design considering the aesthetical – perception properties.

### WORK EXPERIENCE

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Current position: full professor (area 09 SSD ING IND 22 - materials science and technology); from 4/2021 head of the Coatings and Industrial Anticorrosion laboratory. Department of Industrial Engineering, University of Trento, Trento, Italy

#### Academic career

1992- 1994	Scientific collaborator Materials Engineering Department of University of Trento.
1993/94- 1995/96	PhD student in “materials science and technology” University of Florence.
1996- 1997	Scientific collaborator Materials Engineering Department of University of Trento
1997-1999	Post-doctoral Materials Engineering Department of University of Trento
01/2000 - 01/2005	Researcher (RTD) Materials Engineering Department of University of Trento.
01/2005 -09/2014	Assistant Professor Department of industrial engineering.
10/2014– 2023	Ass. Professor Department of Industrial Engineering, University of Trento, Trento, Italy
2024 – present	full professor Department of Industrial Engineering, University of Trento, Trento, Italy
2000-2007	Adjunct Professor Polytechnic of Turin and Free University of Bozen, Bozen, Italy
2008-present	Adjunct Professor Free University of Bozen, Bozen, Italy
2007 and 2009	Adjunct Professor Accademia delle Belle Arti (art collage) Cignaroli, Verona, Italy
1999-2001	Visiting Professor Aix Marseille Université, CNRS UMR 7246, Marseille – France
2002	Visiting Professor Depto Ingenieria de Materiais, ETS Enxenoires Indust., Universidade de Vigo, Vigo, Spain

2003-2008

Visiting Professor Aix Marseille Université CNRS UMR 7246, Marseille – France

## EDUCATION AND TRAINING

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### Materials Engineering (5-year degree)

*University of Trento* [1986 – 1991]

### PhD in “materials science and technology” University of Florence.

*University of Florence* [years 1993/94- 1995/96]

## LANGUAGE & COMMUNICATION SKILLS

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### Language

first language (s): **italian**

#### English

**LISTENING:** fairly good **SPOKEN INTERACTION:** fairly good **WRITING:** good

#### French

**LISTENING:** very good **SPOKEN INTERACTION:** very good **WRITING:** --

## RESEARCH ACTIVITY AND SCIENTIFIC PUBLICATIONS

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### Topics

- The research activity is in the field of materials science and engineering with particular attention to their durability. Materials damage due to corrosive phenomena and mechanical actions was one of the main topic. The methods for improving these surface qualities have therefore been considered. Research work used a wide range of experimental techniques, from industrial corrosion tests to electrochemical characterization, from optical and electronic microstructural to X ray and FTIR diffraction techniques. The main topics are comprised in the following classification:
- Electrochemical behavior of materials and their surfaces as a function of different treatments;
- Evaluation of surface treatments to improve surface characteristics (adhesion of organic coatings);
- Protective capacities (both towards corrosion and degradation by mechanical action) of different types of coatings deposited by different technologies: metallic, ceramic and organic coatings;
- Site more than 10 years, part of the research has focused on the relationship between materials and design, considering, in addition to the technical design, the aesthetic-perceptive aspects, in particular the study of color and the aspects connected to the surface.

### Bibliometric data (from Scopus database, 10/01/2024)

- Total documents: 215;
- Books number: 4
- Book chapters: 15
- Citations number: 4424
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# Rossi, Stefano

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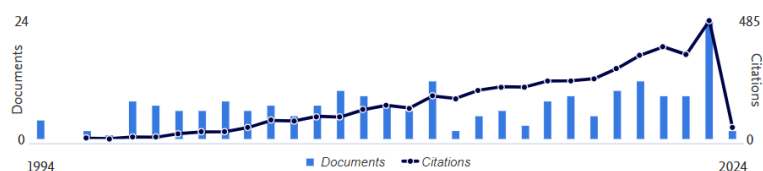
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## Most contributed Topics 2018–2022

Heat Islands; Reflective Coatings; Roofs

6 documents

Enamels; Steel; Kovar (Trademark)

6 documents

Graphene Oxide; Nanofiltration Membranes; Graphite

5 documents

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## Publications on international journals, books and books chapters

### 2024

- A. Cristoforetti, J. Izquierdo, R. M. Souto, F. Deflorian, M. Fedel, S. Rossi “In-situ measurement of electrochemical activity related to filiform corrosion in organic coated steel by scanning vibrating electrode technique and scanning micropotentiometry”, *Corrosion Science* 227 (2024) 1116 doi.org/10.1016/j.corsci.2023.11166969

### 2023

- A. Cristoforetti, F. Deflorian, M. Fedel, S. Rossi, “On the occurrence of filiform corrosion on organic coated carbon steel exposed to cyclic aging test”, *Corrosion*, vol 79 paper 4443, 2023. doi.org/10.5006/4443
- M. Calovi, S. Rossi, “Eco-Friendly Multilayer Coating Harnessing the Functional Features of Curcuma-Based Pigment and Rice BranWax as a Hydrophobic Filler” *Materials* 2023, 16, 7086. doi.org/10.3390/ma16227086
- A. Zanardi, M. Calovi, S. Rossi, Porcelain Enamel Coatings for Building Façades, *Applied Sciences Appl. Sci.* 2023, 13, 9952. doi.org/10.3390/app13179952
- A. Condini, V. Morozov, C. Trentalange, S. Rossi “Modeling LEDs radiation patterns for curing UV coatings inside of pipes” *Optical Materials* 144 (2023) 114275 doi: 10.1016/j.optmat.2023.114275
- M. Calovi, V. Coroneo, S. Rossi “Antibacterial efficiency over time and barrier properties of wood coatings with colloidal silver” *Applied Microbiology and Biotechnology*, 2023 Doi: 10.1007/s00253-023-12710-1
- M. Calovi, A. Zanardi, S. Rossi, “Improvement of the thermal efficiency of organic roof-coatings through design aimed at increasing the durability of thermochromic pigments” *Progress in Organic Coatings* 185 (2023) 107928, doi: 10.1016/j.porgcoat.2023.107928 IF 6.6,
- M. Calovi, S. Rossi, “Comparative Analysis of the Advantages and Disadvantages of Utilizing Spirulina-Derived Pigment as a Bio-Based Colorant for Wood Impregnator, *Coatings* 2023, 13, 1158, doi: 10.3390/coatings13071158
- A. Cristoforetti, S. Rossi, F. Deflorian, M. Fedel “Comparative study between natural and artificial weathering of acrylic-coated steel, aluminum, and galvanized steel” *Materials and Corrosion*” Wiley 2023, DOI:10.1002/maco.202313858
- M. Calovi, S. Rossi “Synergistic contribution of bio-based additives in wood paint: The combined effect of pigment deriving from spirulina and multifunctional filler based on carnauba wax” *Progress in Organic Coatings*; Volume 182, September 2023, 107713; doi.org/10.1016/j.porgcoat.2023.107713;
- M. Fedel, A. Rosati, M. Bertasini, S. Rossi “Cu doped YInO<sub>3</sub>-ZnO green colored NIR reflective pigments: synthesis and application in PMMA based cool-roof coatings” *Progress in Organic Coatings* 182 (2023) 107708; doi.org/10.1016/j.porgcoat.2023.107708

- Massimo Calovi, Stefano Rossi “Impact of high concentrations of cellulose fibers on the morphology, durability and protective properties of wood paint” *Coatings* 2023, 13, 721. doi.org/10.3390/coatings13040721
- Massimo Calovi, Stefano Rossi, “From wood waste to wood protection: new application of black bio renewable water-based dispersions as pigment for bio-based wood paint” *Progress in Organic Coatings* 180 (2023) 107577, doi.org/10.1016/j.porgcoat.2023.107577
- Massimo Calovi, Stefano Rossi, “Durability and thermal behavior of functional paints formulated with recycled-glass hollow microspheres of different size” *Materials* 2023, 16, 2678, doi.org/10.3390/ma16072678
- Andrea Cristoforetti, Stefano Rossi, Flavio Deflorian, Michele Fedel, “On the limits of the EIS low-frequency impedance modulus as a tool to describe the protection properties of organic coatings exposed to accelerated aging tests” *Coatings* 2023, 13(3), 598; doi.org/10.3390/coatings13030598
- Andrea Cristoforetti, Michele Fedel, Stefano Rossi, An electrochemical study on the mechanism of filiform corrosion on acrylic-coated carbon steel. *Progress in Organic Coatings* Volume 179, June 2023, 107525, doi.org/10.1016/j.porgcoat.2023.107525;
- F. Russo, V. Fontanari, E. Rustighi, M. Lekka, L. Hernandez, S. Rossi “Composite vitreous enamel coatings with the addition of 316L stainless steel flakes: novel insights on their behaviour under mechanical stresses” *Surface & Coatings Technology* 459 (2023) 129393 doi.org/10.1016/j.surfcoat.2023.129393
- Massimo Calovi, Stefano Rossi, “Functional Olive Pit Powders: The Role of the Bio-Based Filler in Reducing the Water Uptake Phenomena of the Waterborne paint” *Coatings* 2023, 13, 442. Doi: 10.3390/coatings13020442
- Massimo Calovi, Stefano Rossi, “Olive pit powder as multifunctional pigment for waterborne paint: influence of the bio-based filler on the aesthetics, durability and mechanical features of the polymer matrix” *Industrial Crops & Products* 194 (2023) 116326; doi: 10.1016/j.indcrop.2023.116326
- H.U. Rehman, F. Russo, M. Calovi, O. Massidda, S. Rossi, “Antimicrobial Performance of Innovative Functionalized Surfaces Based on Enamel Coatings: The Effect of Silver-Based Additives on the Antibacterial and Antifungal Activity” *International Journal of Molecular Sciences*, 2023, 24(3), 2364, doi 10.3390/ijms24032364
- M. Calovi, V. Coroneo, S. Palanti, S. Rossi, “Colloidal silver as innovative multifunctional pigment: the effect of Ag concentration on the durability and biocidal activity of wood paints” *Progress in Organic Coatings* 175 (2023) 107354, https://doi.org/10.1016/j.porgcoat.2022.107354
- M. Benedetti, M. Orempuller, F. Russo, V. Fontanari, S. Rossi, “Fatigue corrosion behavior of friction-welded stainless and carbon steel dissimilar joint” *Fatigue & Fracture of Engineering Materials & Structures (FFEMS)* 2023;( 46) 555–573. DOI: 10.1111/ffe.13884
- T. Ramdé, S. Rossi, M. Fedel, L. Bonou; Low temperature curing polyorganosilazane coatings for copper corrosion protection: effect of precursor concentration and relative humidity (R.H.) *Journal of Applied Electrochemistry* (2023) 53:797–809 https://doi.org/10.1007/s10800-022-01801-y;
- S. Rossi, A. Rosati, M. Fedel, L. Benedetti; “Study of Cool Roof Paints with the Comparison of Different Artificial Illuminants with Natural Exposure” *Environmental Science and Engineering, Book Series; International Conference on Building Energy and Environment; COBEE 2022: Proceedings of the 5th International Conference on Building Energy and Environment* pp 2835–2838 n 302, Springer, Singapore. doi.org/10.1007/978-981-19-9822-5\_302; Editor Wang L. L.; Ge H. ; Zhai Z.J.; Qi D.; Ouf M.; Sun C.; Wang D., Springer Nature; ISSN 1863-5520
- M. Fedel, A. Rosati, S. Rossi, “YIn0.9 M (Mn, Cu, Fe) 0.1O3-ZnO smart nano-pigments for cool-roof application: structure/performance correlations” *Environmental Science and Engineering, Book Series, International Conference on Building Energy and Environment , COBEE 2022: Proceedings of the 5th International Conference on Building Energy and Environment* pp 2881–2884, n. 307 Springer, Singapore. doi.org/10.1007/978-981-19-9822-5\_307, Editor Wang L. L.; Ge H. ; Zhai Z.J.; Qi D.; Ouf M.; Sun C.; Wang D., Springer Nature -; ISSN 1863-5520  
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- Tambi Ramdé, Stefano Rossi, Michele Fedel, Lucien Bonou, “Low temperature curing polyorganosilazane coatings for copper corrosion protection: effect of RH and precursor concentration” *Journal of Applied Electrochemistry (JACH)* in press dic 2022; DOI: 10.1007/s10800-022-01801-y
- Matteo Benedetti, Mattia Orempuller, Francesca Russo, Vigilio Fontanari, Stefano Rossi, “Fatigue corrosion behavior of friction-welded stainless and carbon steel dissimilar joint” *Fatigue & Fracture of Engineering Materials & Structures (FFEMS)* 2022;1–19. DOI: 10.1111/ffe.13884

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Francesca Russo Berenice Furlan; Massimo Calovi; Orietta Massidda, Stefano Rossi, "Silver-based vitreous enamel coatings: assessment of their antimicrobial activity towards Escherichia coli and Staphylococcus aureus before and after surface degradation" Surface & Coatings Technology 445 (2022) 128702; IF 4.865;

<https://doi.org/10.1016/j.surfcoat.2022.128702>

- S Rossi, M. Pinamonti M. Calovi, "Influence of soil chemical characteristics on corrosion behaviour of galvanized steel" Case Studies in Construction Materials. Case Studies in Construction Materials 17 (2022) e01257. doi.org/10.1016/j.cscm.2022.e01257

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Stefano Rossi "Powder and High-Solid Coatings"; Editorial, Coatings MDPI 2022, 12, 786

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- A. Cristoforetti, M. Fedel, F. Deflorian, S. Rossi, "Influence of deposition parameters on the behavior of nitro-cobalt-based and Ti-hexafluoride-based pretreatments", Journal of Coatings Technology and Research, 19 (3) 859–873, 2022 doi.org/10.1007/s11998-021-00563-0

• Massimo Calovi, Berenice Furlan, Valentina Coroneo, Orietta Massidda, Stefano Rossi, "Facile route to effective antimicrobial aluminum oxide layer realized by co-deposition with silver nitrate" Coatings MDPI 2022, 12(1), 28; <https://doi.org/10.3390/coatings12010028>

• Massimo Calovi and Stefano Rossi, "Durability of Acrylic Cataphoretic Coatings Additivated with Colloidal Silver" Coatings 2022, 12, 486. doi.org/10.3390/coatings12040486,

• Stefano Rossi, Federico Valdrè, Massimo Calovi, "Validation of adhesion characterization methods for anti-stick coatings applied in cooking systems". Journal of Coatings Technology and Research 19, (2022) 1287–1301 doi.org/10.1007/s11998-022-00611-3, p 1-15

## 2021

• Francesca Russo, Stefano Rossi, Attilio Monzio Compagnoni,– Porcelain Enamel coatings, Smalto Porcellanato dic 2021 vol 63 n2/21 p. 15- 33

• Francesca Russo, Berenice Furlan, Massimo Calovi, Attilio Compagnoni, Orietta Massidda, Stefano Rossi, Antibacterial properties of porcelain enamels: the application of ISO 22196:2011 standard" Smalto Porcellanato dic 2021 vol 63 n2/21 p. 57- 70

• Andrea Rosati, Michele Fedel, Stefano Rossi, "Laboratory scale characterization of cool roof paints: Comparison among different artificial radiation sources" Progress in Organic Coatings 161 (2021) 106464 IF 5.16; [10.1016/j.porgcoat.2021.106464](https://doi.org/10.1016/j.porgcoat.2021.106464)

• Andrea Rosati, Michele Fedel, Stefano Rossi "NIR reflective pigments for cool roof applications: A comprehensive review" Journal of Cleaner Production 313 (2021) 127826

• Stefano Rossi, Francesca Russo, Massimo Calovi, Mònica del Rincòn, David Velez, The influence of the size of corundum particles on the preroperties of chemically resistant porcelain enamels Ceramics International 47 (2021) 11618–11627

• Massimo Calovi | Francesca Russo, Stefano Rossi "Esthetic performance of thermochromic pigments in cataphoretic and sprayed coatings for outdoor applications" J Appl Polym Sci. Volume138, Issue26, July 10, 2021, 50622;

• Michele Fedel, Janis Franch, Stefano Rossi; Effect of thickness and sealing treatments on the corrosion protection properties of anodic oxide coatings on AA5005; Surface & Coatings Technology 2021 Volume 408, 25 February 2021, 126761

• Massimo Calovi Francesca Russo Stefano Rossi "Synergic behavior of graphene-based filler and thermochromic pigments in cataphoretic coatings" Progress in Organic Coatings Volume 150, January 2021, 105978

• Stefano Rossi, Matteo Simeoni, Alberto Quaranta Behavior of chromogenic pigments and influence of binder in organic smart coatings"; Dyes and Pigments – Elsevier 2021, vol 184, 108879,

• Francesca Russo, Stefano Rossi, Attilio Monzio Compagnoni, Porcelain Enamel Coatings, Encyclopedia 2021, 1, 388–400, MDPI,

- Andrea Rosati, Michele Fedel, Stefano Rossi,  $\text{YIn}_0.9\text{Mn}_0.1\text{O}_3\text{-ZnO}$  NIR reflective nano-pigment exhibiting three different colors: Ochre, cyan blue, and deep blue, *Journal of Solid State Chemistry* 299 (2021) 122176

- Stefano Rossi, Francesca Russo, Massimo Calovi, "Durability of vitreous enamel coatings and their resistance to abrasion, chemicals and corrosion: a review." *Journal of Coatings Technology and Research* 18, (2021) 39–52

#### 2020

- Stefano Rossi, Hampus Lindmark, Michele Fedel, "Colored Paints Containing NIR-Reflective Pigments Exposed to Accelerated Ultraviolet Radiation Aging with Possible Application as Roof Coatings" , *Coatings MDPI* 2020, 10(11), 1135;

- Massimo Calovi, Stefano Rossi, Flavio Deflorian, Sandra Dirè, Riccardo Ceccato, "Graphene-based reinforcing filler for double-layer acrylic coatings" *Materials MDPI*, Basel Switzerland 2020, 13,

- Stefano Rossi, Francesca Russo, Alberto Maria Lemmi, Matteo Benedetti, Vigilio Fontanari, Fatigue Corrosion Behavior of Friction Welded Dissimilar Joints in Different Testing Conditions", *Metals* 2020, 10, 1018;

- Stefano Rossi, Michele Fedel, Thermal behaviour and weathering resistance of coil coatings for energy-efficient buildings, *E3S Web of Conferences* 172, 23006 (2020) NSB 2020;

- Andrea Rosati, Michele Fedel, Stefano Rossi, NIR reflective pigments to mitigate the urban heat islands effect (UHIE), *E3S Web of Conferences* 172, 03006 (2020) NSB 2020;

- Massimo Calovi, Stefano Rossi, Flavio Deflorian, Sandra Dirè, Riccardo Ceccato, Xiaolei Guo, Gerald Frankel, "Effects of graphene-based fillers on cathodic delamination and abrasion resistance of cathaphoretic organic coatings", *Coatings* 2020, 10, 602;

- Stefano Rossi, Francesca Russo, N. Gasparre, V. Fontanari, "Influence of graphene addition on the mechanical and surface properties of vitreous enamel coatings" *Surface & Coatings Technology* 398 (2020) 126071

- Stefano Rossi, Luciana Volgare, Carine Perrin-Pellegrino, Carine Chassigneux, Erick Dousset, Marielle Eyraud "Dual Electrochemical Treatments to Improve Properties of Ti6Al4V Alloy" *Materials MDPI*, Basel Switzerland 2020, 13, 2479; 1-16;

- Stefano Rossi, Massimo Calovi, Domenico Dalpiaz, Michele Fedel, The Influence of NIR Pigments on Coil Coatings' Thermal Behaviors, *Coatings MDPI*, Basel Switzerland, 2020, 10, 514; 1-19;

- S. Rossi, F. Russo, "Pearlescent Pigments: history, properties and application in powder coatings" su *Encyclopedia*, MDPI, Basel Switzerland, pa. 1-6; 2020; *Encyclopedia* 2020

- S. Rossi, M. Calovi, "Recent advancements in cathaphoretic coatings with graphene as reinforcing filler" su *Encyclopedia*, MDPI, Basel Switzerland, pa. 1-7; 2020; *Encyclopedia* 2020

- S. Rossi, F. Russo "Porcelain enamel coatings, from the past to the future: solved and unsolved issues for the improvement of their mechanical properties" su *Encyclopedia*, MDPI, Basel Switzerland, pa. 1-9; 2020; *Encyclopedia* 2020

S. Rossi, F. Russo , A. Monzio Compagnoni "A brief history of porcelain enamel: from artistic enamel to technical Enameling" *Encyclopedia* 2020; p. 1-8 doi: 10.32545/encyclopedia202007.0019.v1

- Stefano Rossi, Massimo Calovi and Matteo Tonelli "Powder coating for healthcare aluminum packaging" " *Cosmetics* 2020, 7, (2) 20 p. 1-15

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- Massimo Calovi, Stefano Rossi, Flavio Deflorian, Sandra Dirè, Riccardo Ceccato, Effect of functionalized graphene oxide concentration on the corrosion resistance properties provided by cathaphoretic acrylic coatings, *Materials Chemistry and Physics* 239 (2020) 121984.

#### 2019

- Stefano Rossi, Massimo Calovi, David Velez, Itziar Rodriguez, Monica del Rincon, Jose Maria Munoz, and Hans Juergen Grande, *Microstructural Analysis and Surface Modification of a Vitreous Enamel Modified with Corundum Particles. Advanced Engineering Materials*, Wiley-VCH Verlag GmbH, -2019, vol 21, 1900231 Weinheim

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- M. Calovi, E. Callone, R. Ceccato, F. Deflorian, S. Rossi, S. Dirè, Effect of the Organic Functional Group on the Grafting Ability of Trialkoxysilanes onto Graphene Oxide: A Combined NMR, XRD, and ESR Study; *Materials MDPI* 2019, 12, 3828; p1-13.

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- S. Rossi, N. Gasparre, V. Fontanari, A. Compagnoni, "Modification of the mechanical properties of vitreous enameled aluminium substrate adding graphene flakes." *Key Engineering Materials*, 2019 (volume 813), 49-54,
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- M. Fedel, F.J. Rodríguez Gómez, S. Rossi, F. Deflorian. Characterization of Polyorganosilazane-Derived Hybrid Coatings for the Corrosion Protection of Mild Steel in Chloride Solution. *Coatings* 2019, 9, 680; p. 1-14
- Rossi, S., Bizzotto, M., Deflorian, F., Fedel, M., Study of anodizing process on aluminium foam to improve the corrosion behavior, *Surface and Interface Analysis* 2019, 51, 1194-1206
  - Fedel, M.; Rossi, S.; Deflorian, F.; Polymethyl (hydro)/polydimethylsilazane-derived coatings applied on AA1050: effect of the dilution in butyl acetate on the structural and electrochemical properties, *J. Coat. Technol. Res.* 2019, 16 (4) 1013–1019. 2018
- S. Rossi, M. Fedel, F. Deflorian, and A. Feriotti, The Corrosion Behavior of Anti-Graffiti Polyurethane Powder Coatings *CORROSION SCIENCE AND TECHNOLOGY- Korea*, vol 17 (2018), n 6 p 257-264
- L. G. Ecco, S. Rossi, F. Deflorian, M. Fedel; Electrochemical Behavior of AA5005 Aluminum Alloy in Acidic Chloride-Based Medium Containing CeO<sub>2</sub> Nanoparticles, *Journal of The Electrochemical Society*, 165 (2018) C933-C938
  - S. Rossi, M. Calovi; Addition of graphene oxide plates in cathoretic deposited organic coatings; *Progress in Organic Coatings* 125 (2018) 40–47; doi.org/10.1016/j.porgcoat.2018.08.023
  - S. Rossi, M. Fedel, F. Deflorian, M. Bizzotto, Studio del processo di anodizzazione per la protezione dalla corrosione di schiume metalliche, *La Metallurgia Italiana* 110 (2018) , n. 10; p.12-18
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  - S. Rossi, M. Fedel, F. Deflorian, A. Feriotti, Anti-graffiti properties of polyurethane powder coatings, *Journal of Testing and Evaluation* 45 (2017) 45 n .4
  - T. Ramdé, L.G. Ecco, S. Rossi, Visual appearance durability as function of natural and accelerated ageing of electrophoretic styrene-acrylic coatings: Influence of yellow pigment concentration, *Progress in Organic Coatings*, 103 (2017), Pages 23-32
  - S. Rossi, M. Calovi, M. Fedel, Corrosion protection of aluminum foams by cathoretic deposition of organic coatings, 2017, *Progress in Organic Coatings* 109, pp. 144-151
  - S. Rossi, M. Fedel, L. Da Col, F. Deflorian, S. Petrolli, Coatings to increase the corrosion behaviour of aluminium foam, *Surface Engineering* 2017, 33(6), pp. 405-409
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  - S. Rossi, M. Fedel, S. Petrolli, F. Deflorian, Characterization of the Anti-Graffiti Properties of Powder Organic Coatings Applied in Train Field, *Coatings* 2017, 7, 67, MDPI
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  - P. Russo Spena, S. Rossi, R. Wurzer, Effects of Welding Parameters on Strength and Corrosion Behavior of Dissimilar Galvanized Q&P and TRIP Spot Welds, *Metals* 2017, 7(12), 534 MDPI 2016
  - S. Rossi, Materials selection for a bio-inspired and symbolic product: The Trentino Winter Universiade 2013 torch 'Gentian of Alps', *Proceedings of the Institution of Mechanical Engineers, Part P: Journal of Sports Engineering and Technology*, ISSN: 1754-3371, SagePub, Los Angeles, Washington DC, doi: 10.1177/1754337115583424, IF:0.885 (2016) 230 (3) 203-210
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- M. Fedel, F. Deflorian, S. Rossi, M. Olivier, M. Poelman, M.-E. Druart, “Silane Pre-treatments for Galvanised Steel: Deposition, Adhesion and Corrosion Protection Properties” in “Special Topics on Materials Science and Technology –The Italian Panorama” a cura di D. Acierno, A. d’Amore, D. Caputo, R. Cioffi; Brill, Leiden, (NL), ISBN 978 90 04 17224 1,2009, pag. 203-212.
- F. Deflorian, S. Rossi, M. Fedel, G. Pilzer, L. Fedrizzi, “Characterisation of silane pretreatment for organic coatings on copper” in “Silanes and Other Coupling Agents”, vol. 5, K.L. Mittal (ed) VSP / Brill Academic Publishers, Leiden (NL) 2009, ISBN: 978 900416591 5, pag. 65-85
- S. Rossi, F. Deflorian, “Mechanical degradation of organic paint coatings” cap.7 in “High-performance organic coatings” edited by A. S. Khanna, Woodhead Publishing in materials, 2008; ISBN: 978-1-84569-265-0
- S. Rossi, et al “Vernici. Materiali tecnologie proprietà” a cura di Stefano Turri; Case Editrice Ambrosiana, Milano 2007, ISBN 88-408-1384-6 capitolo 8 – proprietà meccaniche- (in collaborazione con R. Frassine) pag. 235-262 e capitolo 10 – durabilità e degrado - (in collaborazione con S. Turri) p.299-340.
- S. Rossi, F. Deflorian, M. Fedel, L. Fedrizzi, “Silane pre-treatments on copper to improve the adhesion of organic coatings” cap.14 pag.174- 183, in “Innovative pre-treatment techniques to prevent corrosion of metallic surfaces” edited by L. Fedrizzi, H. Terryn, A. Simoes; Woodhead Publishing Limited, Cambridge – England ISBN 978-84569-365-7, 2007
- R. Di Maggio, S. Rossi, P. Aldighieri, L. Fedrizzi, “Deposition of zirconia as an adhesion promoter on Al 1050 alloy: two preparation routes” cap.3 pag.35-51, in “Innovative pre-treatment techniques to prevent corrosion of metallic surfaces” edited by L. Fedrizzi, H. Terryn, A. Simoes; Woodhead Publishing Limited, Cambridge – England ISBN 978-84569-365-7, 2007

#### Academic conferences

More than 160 presentations at national and international conferences including the following most important invitations:

- Rompaint’2001-Pintumed; Bucarest (Romania) 17-18/05/’01
- XXVII FATIPEC CONGRESS 19-21, Aprile 2004, Aix-en-Provence, France
- “2<sup>nd</sup> German-French Summer School” Lozari, Corsica 2-7 September 2007
- PPG Seminar 10 October 2008 Pittsburgh US
- Eurocoat2013, Piacenza, 22/24 October 2013, Urban requalification

- International Symposium on Corrosion & Materials Degradation ISCMD2014 in 9th International Materials Technology Conference and Exhibition (IMTCE) 2014, 13-16 May 2014 Kuala Lumpur Malaysia
- Corrosion 2017 NACE, RIP New Orleans USA, 26-30/03/2017 (invited keynote); award-winning work
- International Conference on PROCESSING & MANUFACTURING OF ADVANCED MATERIALS Processing, Fabrication, Properties, Applications July 8-13, 2018, Paris – FRANCE
- 4th Topical Meeting of the International Society of Electrochemistry, Mar del Plata, Argentina 19/22 March 2023
- 12° Aluminium Two Thousand; Bologna 19-23 September 2023

## Most important academic prizes/awards

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- 1993 Luigi Grifone 1993 prize by SCI (Italian Chemical Society, Electrochemistry Division);
- 2008 prize AIZ Italian Association Galvanizing) and ACAI (Association of Italian Constructors Steel), for “Possible influence of the hot DIP galvanizing process on mechanical properties of steel” (student L. Redolfi; tutor S. Rossi, V. Fontanari, M. Benedetti)
- 2010-2011 best PhD University of Trento “Service life of organic coatings: strategies for improving aesthetic and protective durability” (student E. Scrinzi, tutor: S. Rossi)
- Award 2017 RIP Coatings Corrosion 2017 NACE International; New Orleans 26-30/03/2017
- 3rd prize among the oral presentations at ETCC2022 European Technical Coatings Congress Krakow (Poland) 12–14 July 2022.

## Expert positions

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- Material Expert of ETA-Danmark A/S (Göteborg Plads 1 DK-2150 Nordhavn; [www.etadanmark.dk](http://www.etadanmark.dk); European Union institution (Technical Assessment Body – TAB - in charge of the technical assessment of construction products and is entitled to issue European Technical Assessments - ETAs) year 2017-present.
- Reference laboratory for CISP (Centro Italiano Smalti Porcellanati) from 2021.

## Most important memberships in academic organizations

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- Member of AMMP (NACE International) (Houston US) since 2016.
- ADI (Associazione per il Disegno Industriale) member since 2015.
- Member of AIM (Italian Association of Metallurgy) since 2019.
- Member ISE international Society of Electrochemistry since 2019
- Member of AIMAT Associazione *Italiana* di Ingegneria dei Materiali

## Names and institutions of key international cooperation partners in the last 5 years

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- prof. M. Olivier, Faculté Polytechnique de Mons, Université de Mons, Belgium
- dr. M. Poelman, Materia Nova, Mons, Belgium
- dr. F. Vacandio, dr. M. Eyraud, Aix Marseille Université, CNRS UMR 7246, Marseille – France.
- dr. T. Ramde, Université de Ouagadougou, Ouagadougou, Burkina Faso
- prof. Florence Ansart and prof. Marie-Joëlle Menu, Université Toulouse III - Paul Sabatier – Toulouse, France

- Prof. Francisco Xavier Rodriguez, UNAM Mexico City DC; Mexico  
Fontana Corrosion Centre at The Ohio State University (prof. Gerald Frankel)  
Prof. Ricardo Souto - Universidad de La Laguna, La Laguna – Tenerife – Spain  
Prof. Marcela Vazquez and prof. Beatriz Valcarce; Universidad Nacional de Mar del Plata, Mar del Plata, Argentina.

### **Most important editorships**

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2006 – present Member of the Editorial Board of “Galvanotecnica e Finiture Superficiali” Editore A.I.F.M. Milano  
2005 – present Member of the Editorial Board “European Coatings” Edizioni GPB Milano  
2018- present guest editor of special issue Coatings MDPI (Open Access)  
2019- 2020 guest editor of special issue Metals MDPI (Open Access)  
2020 –present editorial board of Coatings MDPI (Open Access)  
2019 – present editorial board of Cosmetics MDPI (Open Access)

*According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV*

Trento 20/01/2024