

## Curriculum vitae of *Paolo Colombo*

Settore ERC primario: PE11 (Materials engineering)

Settore ERC secondario: PE11\_3 (Engineering of ceramics and glasses)

Settore ERC secondario: PE11\_11 (Porous materials engineering)

### **PERSONAL DETAILS**

Colombo, Paolo (born on December 10, 1960)

Researcher unique identifier(s): ORCID ID: 0000-0001-8005-6618; Scopus Author ID: 7202984554; Web of Science Researcher ID: D-5112-2014; ERC expert: EX2006C104382

URL for website: <https://research.dii.unipd.it/ceramglass/>

#### • **Education and key qualifications**

- 9/1987 Diploma, Glass Engineering, University of Padova, IT  
Prof. Giovanni Scarinci
- 7/1986 Licensed Engineer (Esame di Stato per l'abilitazione alla professione d'Ingegnere)
- 12/1985 Laurea Magistrale, Chemical Engineering (Materials Curriculum), University of Padova, IT  
Prof. Giovanni Scarinci
- 9/1980 Diploma in Flute, Music Conservatory "Cesare Pollini", Padova

#### • **Current positions**

- 11/2005–current Professor of Materials Science and Technology  
Department of Industrial Engineering, University of Padova, IT
- 7/2002–current Adjunct Professor of Materials Science and Engineering  
Department of Materials Science and Engineering, The Pennsylvania State University, US
- 8/2022–current Honorary Professor  
Department of Mechanical Engineering, University College London, UK
- 2/2025–current Honorary Researcher  
Henan Academy of Sciences, Zhengzhou, Henan, CN
- 2/2025–current Honorary Professor  
Xi'an Jiaotong University, Xi'an, Shaanxi, CN

#### • **Previous positions**

- 1/2025–3/2025 Academic Advisor  
Institute for Advanced Ceramics, School of Materials Science and Engineering, Harbin Institute of Technology, CN
- 9/2024 Visiting Professor  
Universidade de São Paulo, São Carlos, BR
- 5/2022–3/2023 Academic Advisor  
Institute for Advanced Ceramics, School of Materials Science and Engineering, Harbin Institute of Technology, CN
- 1/2007–7/2022 Visiting Professor  
Department of Mechanical Engineering, University College London, UK
- 1/2016–6/2016 Mercator Professor  
Department of Ceramic, Glass and Construction Materials, Technical University Bergakademie Freiberg, Freiberg, DE
- 7/2015–7/2015 Foreign Scientist  
INSA (Institut National des Sciences Appliquées de Lyon), Lyon, FR
- 11/1998–10/2005 Associate Professor  
Department of Applied Chemistry and Materials Science, University of Bologna, IT
- 11/1991–10/1992 Fulbright Scholar  
Department of Materials Science and Engineering, The Pennsylvania State University, USA
- 4/1990–10/1998 Assistant Professor  
Department of Mechanical Engineering, University of Padova, IT

- 2/1989-1/1990 Post-doctoral researcher (Consorzio INFM scholarship)  
Department of Mechanical Engineering, University of Padova, IT
- 6/1987–1/1989 Post-doctoral researcher (Accademia dei Lincei scholarship)  
Department of Mechanical Engineering, University of Padova, IT
- 11/1985-10/1986 Compulsory military service

## **RESEARCH ACHIEVEMENTS AND PEER RECOGNITION**

### **Research achievements**

Paolo Colombo's research interests include novel processing routes to architected glasses and ceramics (currently focusing mainly on Additive Manufacturing, using different technologies), the development of ceramic components from preceramic polymers and geopolymers, and the upcycling of hazardous industrial and natural waste.

As an engineer, Paolo Colombo has significantly contributed to improving the processing of ceramics into complex structures, in particular with cellular morphology and via additive manufacturing techniques. His research has spearheaded the international efforts on the use of polymeric and non-conventional precursors to obtain ceramic architected materials suitable for a wide range of functional and structural applications.

- 1) Publications in journals with selective editorial policy: 410 (Scopus)
- 2) Books: 2 (ISBN 16-05950-00-9; ISBN 3-527-31320-6)
- 3) Book chapters: 10
- 4) Patents applied for: 24; granted patents: 20
- 5) h index (accessed 23/03/2025): Google Scholar = 80; Citations = 25260; Scopus = 70; Citations = 19250; WOS = 65; Citations = 16063
- 6) Invited, Keynote and Plenary speaker at 75 international conferences
- 7) Listed in the Stanford World's Top 2% Scientists ranking for the category "Materials" (since 2020)
- 8) PI of several national (PRIN, PNR MICs) and international (FP6, FP7, Horizon 2020, Horizon Europe) projects
- 9) PI of several projects with national (ENEA, ENI, Electrolux, ITT Motion Technologies, Industrie Bitossi, etc.) and international (NASA, European Office for Aerospace Research and Development, Foseco, KACST, Swarovski, QinetiQ, etc.) institutions and companies
- 10) PI of several bilateral research projects (Vigoni, IT-DE; Galileo, IT-FR; Italia-Egitto; Royal Society, IT-UK)
- 11) Most cited papers (selection)
  1. P. Colombo, G. Mera, R. Riedel and G.D. Sorarù, "Polymer-Derived-Ceramics: 40 Years of Research and Innovation in Advanced Ceramics," *J. Am. Ceram. Soc.*, **93** (2010) 1805–1837. 2110 citations
  2. A. Zocca, P. Colombo, C.M. Gomes, J. Guenster, "Additive Manufacturing of Ceramics: issues, potentialities and opportunities," *J. Am. Ceram. Soc.*, **98** (2015) 1983–2001. 1174 citations
  3. P. Colombo, "Conventional and novel processing methods for cellular ceramics," *Phil. Trans. R. Soc. A*, **364**[1838] (2006) 109-124. 663 citations
  4. E. Zanchetta, M. Cattaldo, G. Franchin, M. Schwentenwein, J. Homa, G. Brusatin and P. Colombo "Stereolithography of SiOC Ceramic Microcomponents," *Adv. Mater.*, **28** (2016) 370–376. 446 citations
  5. C. Bai, P. Colombo, "Processing, properties and applications of highly porous geopolymers: A review," *Ceram. Inter.*, **44** (2018) 16103-16118. 333 citations
  6. J. Klein, M. Stern, G. Franchin, M. Kayser, C. Inamura, S. Dave, J. Weaver, P. Houk, P. Colombo, M. Yang and N. Oxman, "Additive Manufacturing of Optically Transparent Glass," *3D Print. Add. Manuf.*, **2** (2015) 92–105. 389 citations
  7. P. Colombo, "Engineering Porosity in Polymer-Derived Ceramics," *J. Eur. Ceram. Soc.*, **28** (2008) 1389-1395. 264 citations
  8. P. Colombo, C. Vakifahmetoglu and S. Costacurta, "Fabrication of Ceramic Components with Hierarchical Porosity," *J. Mat. Sci.*, **45** (2010) 5425–5455. 262 citations
  9. C. Vakifahmetoglu, D. Zeydanli, P. Colombo, "Porous polymer derived ceramics," *Mat. Sci. Eng. R*, **106** (2016) 1-30. 251 citations
  10. D. J. Green and P. Colombo, "Cellular Ceramics: Intriguing Structures, Novel Properties, and Innovative Applications," *MRS Bull.*, **28**[4] (2003) 296-300. 201 citations
  11. P. Colombo, "In Praise of Pores," *Science*, **322** (2008) 381-383. 175 citations

### **Peer recognition**

- 2025 Fellow of the International Core Academy of Sciences and Humanities, Division of Engineering and Applied Sciences, HK
- 2024 Academician, Italian Academy of Engineering (ITATEC), IT
- 2024 Academician, Academia Europaea, UK
- 2017 Fellow, European Ceramic Society, BE
- 2016 Academician, European Academy of Sciences, Materials Science Division, BE
- 2011 Fellow, Institute of Materials, Minerals and Mining, UK
- 2010 Fellow, American Ceramic Society, US
- 2006 Academician, World Academy of Ceramics, IT
- 2024 ECerS-ACerS Joint Award-2024, European Ceramic Society, BE and American Ceramic Society, US
- 2023 Bridge Building Award, American Ceramic Society, US
- 2022 CICC Special Contribution award, Chinese Ceramic Society, CN
- 2019 The Polish Ceramic Society Award, PL
- 2016 ACerS Global Ambassador Award, American Ceramic Society, US
- 2013 Verulam Medal & Prize, The Institute of Materials, Minerals and Mining, UK
- 2011 Edward C. Henry Award, American Ceramic Society, US
- 2010 Global Star Award, American Ceramic Society, US
- 2007 Pfeil Award, The Institute of Materials, Minerals and Mining, London, UK
- 2022 – 2024 President, International Ceramic Federation, US
- 2024 – 2026 Vice president, Italian Ceramic Society, IT

### **ADDITIONAL INFORMATION**

#### **Editorial Activities**

- 2022 – current Editor-in-Chief, Open Ceramics, Elsevier, Amsterdam, NL (ISSN: 2666-5395)
- 2002 – current Associate Editor, Journal of the American Ceramic Society, John Wiley & Sons, Inc., Hoboken, NJ, USA (ISSN 1551-2916)
- 2010 – current Member, Associate Editorial Board “Materials Letters”, Elsevier, Amsterdam, NL (ISSN: 0167-577X)
- 2011 – current Member, International Editorial Board “Ceramics International”, Elsevier, Amsterdam, NL (ISSN: 0272-8842)
- 2014 – current Member, Editorial Board “Journal of Porous Materials”, Springer Netherlands, Amsterdam, NL (ISSN: 1380-2224)
- 2018 – current Member, Editorial Board “Journal of Asian Ceramic Societies”, Elsevier, Amsterdam, NL (ISSN 2187-0764)
- 2005 – current Member, Editorial Board “Advances in Applied Ceramics: Structural, Functional and Bioceramics” – formerly British Ceramic Transactions, Maney Publishing, London, UK (ISSN 1743-6753)
- 2022 – current Member, Editorial Board “Chinese Journal of Mechanical Engineering: Additive Manufacturing Frontiers” (ISSN 2772-6657)
- 2022 – current Member, Editorial Committee “Journal of Advanced Ceramics”, Springer, Berlin, DE (ISSN 2226-4108)
- 2022 – current Member, Editorial Advisory Board “Transactions of the Indian Ceramic Society,” Taylor and Francis, UK (ISSN 0371-750X)
- 2024 – current Member, Advisory Board “Materials Genome Engineering Advances”, John Wiley & Sons, Inc., Hoboken, NJ, USA (ISSN 2940-9497)

#### **Career breaks, diverse career paths and major life events**

- 1978 – 1997 Musician (part time), I Solisti Veneti; Orchestra da Camera di Padova e del Veneto, IT
- November 2020 Hospitalization, semi-intensive care unit, Padova hospital, Covid 19

#### **Other contributions to the research community**

##### **Organisation of Scientific Meetings**

- 2002 – current Lead and co-organizer of 151 symposia at international conferences
- 7/2019 Chair, XVI European Ceramic Society conference, Torino, IT
- 9/2026 Chair, Shaping X, Padova, IT

## **Institutional Responsibilities**

2022 – 2024	President, International Ceramic Federation, US
2024 – 2026	Vice president, Italian Ceramic Society, IT
2021 – current	Member, JECS Trust board, BE
2021 – current	Member, University Scientific Committee/Commissione Scientifica di Ateneo, University of Padova, IT
2017 – current	Officer, Materials Science Division of the European Academy of Sciences, BE
2012 – 2020	Head, PhD school in Industrial Engineering, University of Padova, IT
2008 – 2011	Head, BSc and MSc programs in Materials Engineering, University of Padova, IT

## **Reviewing Activities**

2006 – current	Member, EPSRC (Engineering and Physical Sciences Research Council) Peer Review College
2022 – current	Panel member, ERC Advanced Grants (2022, 2024)
2012 – 2017	Chair, International Advisory Panel EPSRC project “Materials Systems for Extreme Environments”
2011 – 2011	Panel member, DFG Priority Programme 1568 “Design and Generic Principles of Self-healing Materials,” DE
1998 – current	Reviewer for >50 journals (including Science, Nature, Nature Materials, etc.)
1998 – current	Reviewer for: National Science Foundation (US); Air Force Office for Scientific Research (US); Academy of Sciences of the Czech Republic (CZ); Engineering and Physical Sciences Research Council (UK), German Research Foundation (DE); Swiss Competence Center Energy and Mobility (CH); Portuguese Foundation for Science and Technology (PT); Latvian Science Council (LV); Agence Nationale de la Recherche (FR); Linz Institute of Technology (AT); National Center of Science and Technology Evaluation (KZ); PAZY Foundation (IL); Polish National Science Centre (PL); The Royal Society (UK); Czech Science Foundation (CZ); European Research Council (EU); Austrian Science Fund (AT); Slovak Academy of Sciences (SK)

## **Memberships of Scientific Societies**

1992 – current	American Ceramic Society (ACerS), US
1990 – current	Associazione Italiana di Ingegneria dei Materiali (AIMAT), IT
2011 – current	Institute of Materials, Minerals and Mining (IOM3), UK
2019 – current	Italian Ceramic Society, IT
2020 – current	RILEM (International Union of Laboratories and Experts in Construction Materials, Systems and Structures), FR
2006 – current	World Academy of Ceramics (WAC), IT
2016 – current	European Academy of Sciences (EurASc), BE
2016 – 2022	Materials Research Society (MRS), US