Paolo Colombo is a professor of Materials Science and Technology at the Department of Industrial Engineering, University of Padova, Padova, Italy. He graduated from the University of Padova with a degree in chemical engineering in 1985 and a diploma in Glass Engineering in 1988.

He was an assistant professor at the University of Padova from 1990 to 1998 and then an associate professor at the University of Bologna, until 2005.

He is also an adjunct professor of Materials Science and Engineering at the Pennsylvania State University, a visiting professor in the Department of Mechanical Engineering of University College London, UK and a member of the EPSRC Peer Review College (UK).

He was a Fulbright Visiting Scholar at the Pennsylvania State University in 1991, a Foreign Scientist at INSA, Lyon, France in 2015, and a DGF Mercator Professor at the Technical University Bergakademie Freiberg, Germany in 2016.

He was elected Academician of the World Academy of Ceramics (2006), Academician of the European Academy of Sciences (2016), Fellow of the American Ceramic Society (2010), Fellow of the Institute of Materials, Minerals and Mining (2011), Fellow of the European Ceramic Society (2017).

He was awarded a Fulbright Scholarship in 1991, the Pfeil Award (The Institute of Materials, Minerals and Mining, London, UK) in 2007, the Global Star Award (The Engineering Ceramics Division of the American Ceramic Society) in 2010, the Edward C. Henry Award (The Electronics Division of The American Ceramic Society) in 2011, the Verulam Medal & Prize (The Institute of Materials, Minerals and Mining, London, UK) in 2013 and the Global Ambassador Award (The American Ceramic Society) in 2016.

He was Principal Investigator for PRIN, Vigoni, Galileo projects and has been involved in European Projects (FP6, FP7, Horizon 2020). He was Principal Investigator for several research contracts with national and international companies.

He published more than 270 papers in peer-reviewed journals, 9 book chapters and holds 10 international patents. He is co-editor of a book on cellular ceramics, a book on polymer-derived-ceramics and 11 proceedings books. He is in the editorial board of 8 international scientific journals (Journal of the American Ceramic Society, Materials Letters, Ceramics International, Journal of Porous Materials, Journal of Materials Research, Journal of Asian Ceramic Societies, Advances in Applied Ceramics: Structural, Functional and Bioceramics, Journal of Ceramic Science and Technology, Materials) and will soon be Editor-in-Chief for a new open access journal published by Elsevier under the sponsorship of the JECS Trust.

h index WOS (accessed 12/7/19): 44; Total Number of Citations: 7331 (without self-citations: 6544); Citing Articles: 4557 (without self-citations: 4374); Average Citations per Item: 28.31

h index Google Scholar (accessed 12/7/19): 56 (40 since 2014); Citations: 12152; i10 index: 196 (150 since 2014),

He has co-organized several international conferences (>100), has given numerous invited talks in the field of porous ceramics, polymer-derived-ceramics and additive manufacturing of ceramics (>50), and has been the guest editor for special issues devoted to those topics (6). He was chair of the XVI conference of the European Ceramic Society (Turin, Italy, 16-20/6/2019).

Paolo Colombo’s research interests include novel processing routes to porous glasses and ceramics (currently focusing mainly on Additive Manufacturing, using different technologies), the development of ceramic components from preceramic polymers and geopolymers, and the vitrification and reuse of hazardous industrial and natural waste. His laboratory runs 8 different AM printers, enabling 3D manufacturing of ceramics from the sub-micron scale to the meter scale.

He is currently involved in 3 EU H2020, 1 national, 1 regional research projects plus 7 research contracts with national and international companies. He is managing a research group comprised of 4 post-docs, 6 PhD students, 2 visiting scientists and several MSc students.

**Selected papers**

**Review papers**

1. P. Colombo, “In Praise of Pores,” *Science*, **322** (2008) 381-383
2. P. Colombo, “Engineering Porosity in Polymer-Derived Ceramics,” *J. Europ. Ceram. Soc.*, **28** (2008) 1389-1395.
3. 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.
4. P. Colombo, C. Vakifahmetoglu and S. Costacurta, “Fabrication of Ceramic Components with Hierarchical Porosity,” *J. Mat. Sci.*, **45** (2010) 5425–5455.
5. P. Colombo and H.P. Degischer, “Highly Porous Metals and Ceramics,” *Mater. Sci. Tech.*, **26** (2010) 1145-1158.
6. P. Colombo, E. Bernardo and G. Parcianello, “Multifunctional Advanced Ceramics from Preceramic Polymers and Nano-sized Active Fillers,” *J. Europ. Ceram. Soc.*, **33** (2013) 453–469
7. P. Colombo, D. Dunand, V. Kumar, “Porous materials: Less is more,” *J. Mater. Res.*, **28** (2013) 2187–2190.
8. E. Bernardo, L. Fiocco, G. Parcianello, E. Storti and P. Colombo, “Advanced Ceramics from Preceramic Polymers Modified at the Nano-Scale: A Review,” *Materials*, **7** (2014), 1927-1956
9. 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.
10. C. Vakifahmetoglu, D. Zeydanli, P. Colombo, “Porous polymer derived ceramics,” *Mat. Sci. Eng. R*, **106** (2016) 1-30
11. C. Bai and P. Colombo, “Processing, properties and applications of highly porous geopolymers: a review,” *Ceram. Int.*, 44, **14** (2018) 16103–16118.

**Foaming/filtering papers**

1. C. Vakifahmetoglu, P. Colombo, E. Pippel and J. Woltersdorf, “Growth of 1D-Nanostructures in Porous Polymer Derived Ceramics by Catalyst-Assisted-Pyrolysis. Part I: Iron Catalyst,” *J. Am. Ceram. Soc.* , **93** (2010) 959-968.
2. C. Vakifahmetoglu, P. Colombo, S. Carturan, E. Pippel and J. Woltersdorf, “Growth of 1D-Nanostructures in Porous Polymer Derived Ceramics by Catalyst-Assisted-Pyrolysis. Part II: Cobalt Catalyst,” *J. Am. Ceram. Soc.*, **93** (2010) 3709–3719.
3. C. Vakifahmetoglu, V. Presser, S.-H. Yeon, P. Colombo, Y. Gogotsi, “Enhanced hydrogen and methane gas storage of silicon oxycarbide derived carbon,” *Micro. Meso. Por. Mater.*, **144** (2011) 105-112
4. M. Fukushima, Y. Yoshizawa, P. Colombo, “Decoration of ceramic foams by ceramic nanowires via catalyst-assisted-pyrolysis of preceramic polymers,” *J. Am. Ceram. Soc.*, **95** (2012) 3071–3077
5. M. Adam, C. Vakifahmetoglu, P. Colombo, M. Wilhelm, G. Grathwohl, “Polysiloxane-Derived Ceramics Containing Nanowires with Catalytically Active Tips,” *J. Am. Ceram. Soc.*, **97** (2014) 959–966.
6. M. Strozi Cilla, M.R. Morelli, P. Colombo, “Geopolymer Foams by Gelcasting,” *Ceram. Inter.*, **40** (2014) 5723–5730
7. M. Strozi Cilla, P. Colombo, M.R. Morelli, “Effect of process parameters on the physical properties of porous geopolymers obtained by gelcasting.” *Ceram. Inter.*, **40** (2014) 13585–13590.
8. M. Strozi Cilla, M.R. Morelli, P. Colombo, “Open cell geopolymer foams by a novel saponification/peroxide/gelcasting combined route,” *J. Europ. Ceram. Soc.*, **34** (2014) 3133–3137.
9. D. Li, E. Guzi de Moraes, P. Colombo, and Z. Shen, “Preparation of nasal cavity-like SiC-Si3N4 foams with hierarchical pore architecture,” *RSC Adv.*, **5** (2015) 27891-27900.
10. M.D.M. Innocentini, J.R. Coury, M. Fukushima and P. Colombo, “High-efficiency aerosol filters based on silicon carbide foams decorated with ceramic nanowires,” *Separ. Purif. Tech.*, **152** (2015) 180–191

**Additive Manufacturing papers**

1. A. Zocca, P. Colombo, J. Guenster, T. Muehler, “Selective laser densification of lithium aluminosilicate glass ceramic tapes,” *Appl. Surf. Sci.*, **265** (2013) 610–614
2. A. Zocca, E. Bernardo, P. Colombo, C.M. Gomes, J. Guenster, “LAS Glass-Ceramic Scaffolds by Three-Dimensional Printing,” *J. Europ. Ceram. Soc.*, **33** (2013) 1525–1533
3. A. Zocca, C.M. Gomes, J. Guenster, A. Staude, E. Bernardo and P. Colombo, “SiOC ceramics with ordered porosity by 3D-printing of a preceramic polymer,” *J. Mater. Res.*, **28** (2013) 2243–2252.
4. A. Zocca, H. Elsayed, E. Bernardo, C.M. Gomes, M.A. Lopez-Heredia, C. Knabe, P. Colombo and J. Günster, “3D-printing of silicate bioceramics using a preceramic polymer as non-sacrificial, reactive binder,” *Biofabr.*, **7** (2015) 025008 (12 pages).
5. G. Franchin and P. Colombo, “Porous geopolymer components through inverse replica of 3D printed sacrificial templates,” *J. Ceram. Sci. Tech.*, **6** (2015) 105-112.
6. 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.
7. 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.
8. E. Zanchetta, M. Cattaldo, G. Franchin, M. Schwentenwein, J. Homa, G. Brusatin and Paolo Colombo “Stereolithography of SiOC Ceramic Microcomponents," Adv. Mater., 28 (2016) 370-376.
9. P. Colombo, J. Schmidt, G. Franchin, A. Zocca and J. Guenster, “Additive Manufacturing of Ceramics using Preceramic Polymers,” *Bull. Am. Ceram. Soc.*, **96** (2017) 16–23
10. G. Franchin, P. Scanferla, L. Zeffiro, H. Elsayed, A. Baliello, G. Giacomello, M. Pasetto, P. Colombo, “Direct Ink Writing of Geopolymeric Inks,” *J. Eur. Ceram. Soc.*, **37** (2017) 2481–2489
11. G. Franchin, L. Wahl and P. Colombo, “Direct ink writing of ceramic matrix composite structures,” *J. Am. Ceram. Soc.*, **100** (2017) 4397–4401.
12. J. Schmidt and P. Colombo, “Digital Light Processing of Ceramic Components from Polysiloxanes,” *J. Eur. Ceram. Soc.*, **38** (2018) 57-66.
13. L. Brigo, J.E.M. Schmidt, A. Gandin, N. Michieli, P- Colombo, G. Brusatin, “3D Nanofabrication of SiOC Ceramic Structures,” *Adv. Sci.* ( 2018) 1800937.
14. J. Schmidt, A. Alpay Altun, M. Schwentenwein, P. Colombo, "Complex mullite structures fabricated via digital light processing of a preceramic polysiloxane with active alumina fillers," *J. Eur. Ceram. Soc.*, **39** (2019) 1336-1343.
15. L. Gorjan, R. Tonello, T. Sebastian, P. Colombo, F. Clemens, "Fused deposition modeling of mullite structures from a preceramic polymer and γ-alumina," *J. Eur. Ceram. Soc.*, **39** (2019) 2463-2471.
16. H. Elsayed, A. Chmielarz, M. Potoczek, T. Fey, P. Colombo, "Direct Ink Writing of Three Dimensional Ti2AlC Porous Structures," *Add. Manuf.*, **28** (2019) 365-372.

**Selected Invited and Plenary talks**

1. “Designing Porosity in Polymer-Derived-Ceramics,” 3rd International Congress on Ceramics (ICC-3), 14-18 November 2010, Osaka, Japan
2. “Novel Developments and trends in Porous Ceramics,” 4th International Congress on Ceramics (ICC-4), 14-18 July 2012, Chicago, USA
3. “Highly Porous Ceramics from Preceamic Polymers,” 8th International Conference on High-Performance Ceramics (CICC-8), 4-7 November 2013, Chongqing, China.
4. “Advanced Ceramics from Preceramic Polymers and Fillers,” Plenary speaker, DKG-Annual Meeting 2014, Symposium on High-performance Ceramic, 24-26 March 2014, Clausthal-Zellerfeld, Germany
5. “Geopolymer Foams with Hierarchical Porosity,” Cellular Materials 2014, 22-24 October 2014, Dresden, Germany.
6. “Additive Manufacturing with Preceramic Polymers,” 40th International Conference and Expo on Advanced Ceramics and Composites (ICACC-40), January 26-29, 2016, Daytona Beach, FL, USA.
7. “Additive Manufacturing of Ceramics using Inorganic Polymers”, 10th International Conference on High-Performance Ceramics (CICC-10), November 4 - 7, 2017, Nanchang, China
8. “Additive Manufacturing of Ceramics with Geopolymers”, 42nd International Conference and Expo on Advanced Ceramics and Composites (ICACC-42), January 21-26, 2018, Daytona Beach, FL, USA.
9. “High-porosity Geopolymer Components by Direct Foaming and Direct Ink Writing”, 42nd International Conference and Expo on Advanced Ceramics and Composites (ICACC-42), January 21-26, 2018, Daytona Beach, FL, USA.
10. “Additive manufacturing of inorganic polymers”, 2nd Nordic Conference on Ceramic and Glass Technology, 10-11/12/2018, Roskilde, Denmark.