



**Curriculum Vitae – Enrico Bernardo**  
**Associate Professor of Materials Science and Technology**  
**University of Padova, Department of Industrial Engineering**

*Born in Mirano, 13 May 1976*

**Education**

- MSc degree (summa cum laude) in Materials Engineering, University of Padova (25/07/2000)
- PhD in Materials Engineering (30/04/2004), University of Bologna

**Work**

- Research associate (2004-2007) at University of Padova, Department of Mechanical Engineering
- Assistant Professor (01/10/2007) of Materials Science and Technology (ING-IND/22) at University of Padova, Department of Mechanical Engineering, later (2012) Department of Industrial Engineering
- 2014: *National Scientific Habilitation to Associate Professor status (09/D1)*
- Associate Professor (01/11/2014) of Materials Science and Technology (ING-IND/22) at University of Padova, Department of Industrial Engineering
- 2017: *National Scientific Habilitation to Full Professor status (09/D1)*
- Full Professor (03/06/2025) of Materials Science and Technology (ING-IND/22) at University of Padova, Department of Industrial Engineering

**Research interests**

- **Development of ceramic materials based on glass, recycled or deriving from natural and industrial waste:**
  - a. Vitrification of industrial waste mixtures (ashes, mining waste, sludges, metallurgical slag, etc.), with 'waste-derived glass' formulations capable of permanently stabilizing pollutants;
  - b. Study of glasses not recyclable in the manufacture of original articles ('waste glasses', e.g. silico-sodium-lime glass cullet separation residues, pharmaceutical borosilicate glass, glass from dismantled cathode ray tubes);
  - c. Obtainment of new products from thermal transformation: waste glass and waste glass are used as raw material for building materials, such as sintered glass ceramics, glass matrix and glass ceramic composite materials, cellular glass and glass ceramics for thermal insulation and acoustic, modified traditional ceramics. In any case, a transformation is pursued according to simple and economical processes, based on sintering by viscous flow of glass (e.g. treatments below 1000°C, in a short time);
  - d. Obtainment of *sustainable* new products, *without* thermal transformation: the most recent research concerns the use of glass in innovative cementitious materials, pertaining to the field of 'inorganic polymers' (including geopolymers), i.e. inorganic materials deriving from the dissolution of raw materials alumino-silicates, in concentrated alkaline solutions, followed by a 'polymerization' phase, according to condensation reactions at nearly room temperature (<100 °C). Waste and waste-derived glasses are considered alone, or mixed with low-cost alumino-silicate materials or other waste materials (e.g. volcanic materials, rock wool fibres, waste from the ceramic industry).

- **Advanced ceramic materials from innovative processes and raw materials – Study of the synergy between synthesis and manufacturing process of glass-ceramic and ceramic materials:**
  - a. Application of pre-ceramic polymers, containing micro- and nano-particles;
  - b. Application of additive manufacturing technologies ("3D printing"), for the development of components with advanced topologies;
  - c. High temperature structural materials or high performance dielectrics: mullite based ceramics, cordierite, zircon, forsterite, SiC/SiAlON composites, SiC/boron carbide composites, SiOC based composites;
  - d. Biomaterials (monolithic and cellular): ceramics based on calcium silicate (wollastonite), based on mixed silicates Ca and Mg (diopside, akermanite), Ca and Zn (hardystonite), bioglasses;
  - e. Ceramic joining and ceramic coatings: joining of SiAlON monoliths, sealants for SOFC/SOEC devices, anti-oxidation coatings of SiC foams and Ti monoliths with silicates (mullite, yttrium silicates, zircon, glass-ceramics)
  - f. Luminescent materials (for application in LED devices): silicates (e.g. yttrium or zinc silicates), alumino-silicates (gehlenite, hardystonite) and SiAlON doped with rare earths (Eu, Ce).

#### ***Awards and honours***

- Pfeil Award (2010), Institute of Materials, Minerals and Mining (UK), for “paper published by the Institute of particular merit in the field of ceramics” [<https://www.iom3.org/award/pfeil-award.html>].
- Pfeil Award (2015), Institute of Materials, Minerals and Mining (UK), for “paper published by the Institute of particular merit in the field of ceramics” [<https://www.iom3.org/award/pfeil-award.html>].
- Inclusion in the list of “**Top 2 percent of the most cited scientists in the world**” created by Stanford University (2020-2022).

#### ***Editorial Boards***

- International Journal of Applied Ceramic Technology (Associate Editor)
- Journal of Asian Ceramic Societies (Associate Editor)
- Biofunctional Materials (Associate Editor)
- Advanced Applied Ceramics
- Nanomaterials and Nanotechnology (Nanophase Materials and Nanoceramics);
- Ceramics (MDPI)
- Solids (MDPI)

#### ***Guest Editor***

- Special Issue "Bioceramics 2016" for Materials (2017)
- Special Issue “Advances in Additive Manufacturing of Bioceramics” for Materials (2019)
- Special Issue “Resource Recovery Through Enhanced Landfill Mining” for Detritus (2019)
- Special Issue “Bioceramics and/or Bioactive Glass-Based Composites” for Frontiers (2021)
- Special Issue “FUNGLASS” for International Journal of Applied Glass Science (2021)
- Special Issue “Resource Recovery Through Enhanced Landfill Mining” for Detritus (2022)
- Special Issue “Glass-Ceramics: A Key Technology for Advanced Engineering Applications” for Solids (2023)
- **Special Issue “Glass, Glass-ceramics, and Ceramics with Additional Functionalities” for Open Ceramics (2024)**

#### ***Projects***

- SACMI S.C. (Imola, Italy), industrial (2009)
- SASIL SpA (Biella, Italy), industrial (2009)

- Consortium EcoStile S.r.l (Pordenone, Italy), EcoGaia S.r.l. (Padova, Italy), EcoEnergy S.r.l. (Bergamo, Italy), industrial (2012)
- Misapor Italia S.r.l. (Biella, Italy), industrial (2013)
- Minerali Industriali SpA (Novara, Italy), industrial (2013)
- Nuovo Corso SpA (Carpineti, Italy), industrial (2013)
- Nippon Electric Glass (Otsu, Japan)
- “BioBONE” (Design, prototyping and validation of advanced BIOceramics for BONE tissue engineering), academic (University of Padova) (2013)
- TWINNING DII “Materiali Vetroceramici da Rifiuti Industriali per Applicazioni Funzionali (MaVeRIF), academic (Department of Industrial Engineering) (2017) – principal investigator
- VIGONI 2010 “Novel Monolithic and Cellular Bioactive Silicate-based Ceramics from Preceramic Polymers and Nano-sized Fillers” (Italy-Germany bilateral project, 2011-2013)
- KACST (King Abdulaziz City for Science and Technology - Riyadh, Saudi Arabia), industrial (2011)
- FP7-People-2010-ITN “GlaCERCo” #264526 (Glass and Ceramic Composites for High Technology Applications), european project (2011) – lead representative for University of Padova and work package leader
- H2020-MSCA-ITN-2014 “CoACH” #642557 (Advanced glasses, Composites And Ceramics for High growth Industries European Training Network, european project (2015) – lead representative for University of Padova and work package leader
- H2020-MSCA-ITN-2016 “NEW-MINE” #721185 (EU Training Network for Resource Recovery Through Enhanced Landfill Mining, european project (2016) – lead representative for University of Padova and work package leader
- H2020-WIDESPREAD-2014-1 (WIDESPREAD-1-2014, Teaming)- Centre for functional and surface-functionalized glasses (FunGLASS) #664440, european project (2015) – lead representative for University of Padova
- H2020-WIDESPREAD-2016-2017 (H2020-WIDESPREAD-01-2016-2017-TeamingPhase2) - Centre for functional and surface-functionalized glass (FunGLASS) #739566, european project (2017) - lead representative for University of Padova
- SusPIRe: “SUStainable Porous ceramics from Inorganic Residues”, academic (Department of Industrial Engineering - BIRD202134/20) (2020) – principal investigator
- “Bio-inspired volumetric modelling approach for Additive Manufacturing”, academic (Department of Civili, Building and Architectural Engineering– BIRD215025) (2021)
- UniSMART- RB Innovation Srl, industrial (2021)
- INSTM “Sabbie da fonderia in conglomerati cementizi innovativi a base di vetro e scarti di manifattura del laterizio”, academic (2022)
- RB Innovation Srl, industrial (2022)
- GAMbleCer: “Glass-supported Large Scale Additive Manufacturing of Sustainable Ceramics”, academic (Department of Industrial Engineering – BIRD224129) (2022)
- Borgna Glass Srl, industrial (2023)
- **J ECS Trust mobility project (supervision of Dr. Anastasiia Novokhatska): ‘Design and manufacturing of Solid Oxide Fuel Cells components by 3D printing technologies’ (Jan-Apr 2024), #2023354**
- Glass\_Trea.S.U.Res (Glass-based Treatments for Sustainable Upcycling of Inorganic Residues), PRIN Bando 2022 PNRR (national project, Ministry of University and Research) #P2022S4TK2, academic (2023-25) – principal investigator

***(Co-)organized international conferences***

- Co-organizer of symposium “International Symposium on Advanced Processing and Manufacturing Technologies for structural and Multifunctional Materials and Systems” in “International Conference & Exposition on Advanced Ceramics & Composites” (ICACC), Daytona Beach FL, since 2018;

- Co-organizer of symposium “International Symposium on Green and Sustainable Technologies for Materials Manufacturing and Processing” in “Materials Science and Technology” Conference and Exhibition (MS&T, variable locations), since 2018;
- Co-organizer of symposium “SYMPOSIUM T4S3: Novel, Green, and Strategic Processing and Manufacturing Technologies”, at CMCEE-14 Budapest 2024;
- Co-organizer of symposium “Outreach, Glass Technology. Manufactory, Recycling, and Cross-Cutting Topics” at “2023 Glass & Optical Materials Division Annual Meeting (GOMD 2023)”, New Orleans, LA 2023;
- “Symposium VI: Recycling and Raw Materials” and session “V.2 Sintering, Powder-based Processes and Additive Manufacturing”, at “26<sup>th</sup> International Congress on Glass (ICG)”, Berlin 2022;
- Co-organizer of symposium “Next Generation Biomaterials” in “International Conference & Exposition on Advanced Ceramics & Composites”, Daytona Beach FL, from 2018 to 2022;
- Co-organizer of symposium “Inorganic and critical raw materials for the circular, low-carbon, and digital economy”, in “EUROMAT”, Graz 2021
- **Co-organizer and local symposium organizer of “Innovative Processing and Synthesis”, XVI ECerS conference, Turin 2019**
- Co-organizer of symposium “Green Technologies and Joining of Ceramics”, in “International Conference and Exposition on Advanced Ceramics and Composites” – Daytona Beach, FL 2019
- **Main organizer** of symposium “Eco-Friendly and Sustainable Ceramics”, in “Materials Science and Technology Conference and Exhibition” – Columbus, OH 2018
- Co-organizer of symposium “Challenges and Opportunities in Industrial Ceramics”, XV ECerS conference, Budapest 2017
- Co-organizer of V International Conference “Integration, Partnership and Innovation in Construction Science and Education” (IPICSE–2016), Moscow 2016

***Invited speaker***

- 49th International Conference and Exposition on Advanced Ceramics and Composites (ICACC 2025) – Daytona Beach, FL, January 2025 (3 talks)
- 14th International Conference on Ceramic Materials and Components for Energy and Environmental Systems (CMCEE-14) Budapest (Hungary), August 2024 (3 talks)
- 48th International Conference and Exposition on Advanced Ceramics and Composites (ICACC 2024) – Daytona Beach, FL, January 2024
- Sunglass, 3rd Summer School on nuclear and industrial glasses for energy transition, Nimes (France), September 2023
- **18th International Conference of the European Ceramic Society (ECERS), Lyon (France), July 2023**
- “2023 Glass & Optical Materials Division Annual Meeting (GOMD 2023)”, New Orleans, LA June 2023;
- “Engineering Ceramics 2023 - Ceramics for circular economy”, Smolenice Castle, Slovakia, May 2023
- 47th International Conference and Exposition on Advanced Ceramics and Composites (ICACC 2023) – Daytona Beach, FL, January 2023 (3 talks)
- Materials Science and Technology 2022 (MS&T22) – Pittsburgh, PA, USA, October 2022 (2 talks)
- 26th International Congress on Glass (ICG2022), Berlin, July 2022
- 15th International Ceramics Congress (CIMTEC 2022), Perugia, June 2022
- 46th International Conference and Exposition on Advanced Ceramics and Composites (ICACC 2022) – Daytona Beach, FL, January 2022 (2 talks)
- 14th Pacific Rim Conference on Ceramic and Glass Technology (PACRIM 14) including Glass & Optical Materials Division 2021 Annual Meeting (GOMD 2021), Vancouver, December 2021
- 14th International Conference on Solid State Chemistry, Trenčín, Slovakia, June 2021
- 45th International Conference and Exposition on Advanced Ceramics and Composites (ICACC 2021) – Daytona Beach, FL, February 2021 (3 talks)

- 45th International Conference and Exposition on Advanced Ceramics and Composites (ICACC 2020) – Daytona Beach, FL, January 2020 (2 talks)
- “Engineering Ceramics 2019 - Ceramics for people”, Smolenice Castle, Slovakia, May 2019
- International Conference on High-Performance Ceramics (CICC), Kunming, China, May 2019
- 43rd International Conference and Exposition on Advanced Ceramics and Composites (ICACC 2019) – Daytona Beach, FL, USA, January 2019
- Materials Science and Technology 2018 (MS&T18) – Columbus, OH, October 2018
- 14th International Ceramics Congress (CIMTEC 2018), Perugia, June 2018
- 4th International Symposium Enhanced Landfill Mining, Mechelen, February 2018
- 42nd International Conference and Exposition on Advanced Ceramics and Composites (ICACC 2018) – Daytona Beach, FL, January 2018 (2 talks)
- Materials Science and Technology 2017 (MS&T17) – Pittsburgh, PA, October 2017 (2 talks)
- 12th Pacific Rim Conference on Ceramic and Glass Technology, Waikaloa, HA, May 2017 (2 talks)
- 41st International Conference and Exposition on Advanced Ceramics and Composites (ICACC 2017) – Daytona Beach, FL, January 2017 (2 talks)
- 4th Cellular Materials CellMAT 2016, Dresden, December 2016
- V Int. Conf. “Integration, Partnership and Innovation in Construction Science and Education” (IPICSE-2016), Moscow, November 2016
- Materials Science and Technology 2016 (MS&T16) - Salt Lake City, UT, October 2016 (2 talks)
- ICC6 6th International Conference on Ceramics, Dresden, August 2016
- 9th International Conference on High Temperature Ceramic Matrix Composites – HTCMC9, Toronto, June 2016
- 40th International Conference & Exposition on Advanced Ceramics & Composites, Daytona Beach (USA), January 2016
- Materials Science and Technology 2015 (MS&T15) – Columbus, OH, October 2015
- 4th Slag Valorization Symposium, Leuven, April 2015 (keynote lecture)
- 39th International Conference & Exposition on Advanced Ceramics & Composites, Daytona Beach (USA), January 2015
- Workshop “How to exploit the porosity of geopolymers?”, CNR-ISTEC Faenza, October 2014
- CIMTEC – 13th International Ceramics Conference, Montecatini Terme, June 2014
- 38th International Conference & Exposition on Advanced Ceramics & Composites, Daytona Beach (USA), January 2014
- Materials Science and Technology 2013 (MS&T13) – Montreal, October 2013
- **13th International Conference of the European Ceramic Society (ECERS), Limoges (France), June 2013 (keynote lecture)**
- 37th International Conference & Exposition on Advanced Ceramics & Composites, Daytona Beach (USA), January 2013
- Materials Science and Technology 2012 (MS&T12) – Pittsburgh, PA, October 2012
- 36th International Conference & Exposition on Advanced Ceramics & Composites, Daytona Beach, FL, January 2012
- 35th International Conference & Exposition on Advanced Ceramics & Composites, Daytona Beach, FL, January 2011
- 3rd International Symposium on SiAlONs and Non-Oxides, Cappadokia (Turkey) – June 2010
- 34th International Conference & Exposition on Advanced Ceramics & Composites, Daytona Beach, FL, January 2010
- XXIV A.T.I.V. International Conference- 59th NGF Annual Meeting “Today’s Challenges for Glass”, Parma, July 2009

### **Memberships**

- **Società Ceramica Italiana (included in European Ceramic Society), since 2009 (#1583)**
- American Ceramic Society, since 2007 (#46615)
- International Commission on Glass (ICG), since 2022

- AIMAT (Associazione Italiana di Ingegneria dei Materiali)

### **Teaching**

- “Materiali Non Metallici e Criteri di Selezione dei Materiali”, in italian, MSc Ingegneria Meccanica (Mechanical Engineering), since 2015/16
- “Materials Selection and Design”, MSc Materials Engineering, since 2009/10
- “Fondamenti di Scienza dei Materiali”, in italian, BSc Ingegneria Chimica e dei Materiali (Chemical and Materials Engineering), since 2022/23
- “Materials Design and Selection for Circular Economy”, MSc in Sustainable Chemistry and Technologies for Circular Economy, since 2022/23
- “Tecnologia dei Biomateriali”, in italian, MSc in Bioingegneria (Bioengineering), 2021/22
- “Materiali”, in italian, BSc in Ingegneria dell’Energia (Energy Engineering), 2015-2019, 2019-21
- “Scienza e Tecnologia dei Materiali Polimerici”, in italian, BSc Ingegneria Chimica e dei Materiali (Chemical and Materials Engineering), 2018/19
- “Scienza dei Materiali e Metallurgia”, in italian, BSc in Ingegneria Meccanica (Mechanical Engineering), 2010-2014
- “Scienza dei Materiali”, in italian, BSc in Ingegneria Meccanica (Mechanical Engineering), 2008-2014
- “Scienza e Tecnologia dei Materiali 1”, in italian, BSc in Ingegneria dei Materiali (Materials Engineering), 2007/08
- “Materiali 1”, in italian, BSc in Ingegneria Aerospaziale (Aerospace Engineering), 2006/08

### + Courses for PhD students in Industrial Engineering:

- Fundamentals of Materials Selection, since 2011/12
- Eco-Informed Materials Choice, since 2014/15

### **Patents**

- R. Donazzon, E. Bernardo, N. Bianchi, ‘Metodo per l’isolamento elettromagnetico di componenti di un motore elettrico’, Italian patent n. 812021000143306 (2021)
- M. Binhussain, P. Colombo, E. Bernardo, M. Binmajed, M. Marangoni, H. Al-Ttlassi, A.M. Alajimi, A. Altamimi, “Glaze composition, method for manufacturing the glaze composition and methods of glazing”, US9290409B2 (2016)
- M. Binhussain, E. Bernardo, P. Colombo, M. Binmajed, M. Marangoni, H. Al-Talasi, A.M. Alajimi, “Method for manufacturing glass-ceramic composite”, US9321695B2 (2016)
- M. Binhussain, H. Atalasi, M. Marangoni, E. Bernardo, P. Colombo, M. Binmajed, “White sintered glass-ceramic tile and method of preparing the same”, US20170210660A1 (2017, application)
- E. Bernardo, M. Caldirola, M. Ferraris, “Materiale termoisolante vetroceramico poroso in lastre e procedimento di ottenimento di tale materiale”, Italian patent TO2013A000620 (2013)
- E. Bernardo, M. Caldirola, M. Ferraris, “Heat-insulating porous glass-ceramic material in slabs and process for producing such material”, WO2015011737A3 (2015, application)
- E. Bernardo, L. Esposito, E. Rambaldi, A. Tucci, S. Hreglich, “Metodo per la realizzazione di prodotti ceramici comprendenti materiale riciclato”, Domanda BO2007A590 (2007), Italian patent n. 0001376429 (2010)

### **Book chapters**

1. **E. Bernardo**, “Glass Matrix Composites” in “Wiley Encyclopedia of Composites”, L. Nicolais, A. Borzacchiello (editors), Wiley-VCH, Weinheim (Germany), 2012.
2. **E. Bernardo**, G. Scarinci, P. Colombo, “Vitrification of Waste and Reuse of Waste-derived Glass”, in “Encyclopedia of Sustainability Science and Technology”, R.A. Meyers, M.F. Fingas (editors), Springer, Heidelberg (Germany), 2012.

### **Bibliometric information (up to May 2025)**

**Full list of papers available at ORCID: <http://orcid.org/0000-0003-4934-4405>**

Database	Scopus	Google Scholar
<i>Number of records</i>	247	278
<i>Total number of citations</i>	7078	9247
<i>H index</i>	48	53
<i>i10-index</i>		174

### List of papers in reversed chronological order

1. Pezzato, L., Kostelac, L., Tonelli, L., Elsayed, H., Kajánek, D., **Bernardo, E.**, Martini, C., Dabalà, M., Brunelli, K. Effect of Different Types of Glass Powders on the Corrosion and Wear Resistance of Peo Coatings Produced on 6061 Aluminum Alloy. *Metals and Materials International*, 31 (2025), pp. 636 - 653
2. Gamal Abd-Elsatar, A., Elsayed, H., Basak, O., Mosas, K., Nowicka, A., Kaňková, H., Mehta, A., Rahel, J., Kraxner, J., Galusek, D., **Bernardo, E.**, Greener, safer, and stronger: plasma ion-exchanged pharmaceutical glass vials for precision drug delivery dosing. *Applied Surface Science Advances* 27 (2025) no. 100760
3. Elsayed, H., Micheli, S., Stabile, F.M., Altun, A.A., Schwentenwein, M., Cimetta E., **Bernardo, E.**, Advanced vat photopolymerization of polymer-derived 70S30C glass-carbon nano-composites: Topological control and biological validation, *J. Eur. Ceram. Soc.*, 45 (2025), art. no. 117384
4. Diamanti, V., Elsayed, H., **Bernardo, E.**, 3D-printed porous mullite lattice structures by hybrid direct ink writing of silicone suspension-emulsions, *J. Am. Ceram. Soc.*, 108 (2025), art. no. e20290
5. Colusso, E., Elsayed, H., Ozóg, P., Kraxner, J., Galusek, D., **Bernardo, E.**, Functionalization of LCD glass for the manufacturing of advanced 3D-printed translucent photocatalytic scaffolds, *Open Ceramics*, 21 (2025) art. no. 100731
6. D'Abbrunzo, I., Venier, E., Selmin, F., Škorić, I., **Bernardo, E.**, Procida, G., Perissutti, B., Stability of Ternary Drug-Drug-Drug Coamorphous Systems Obtained Through Mechanochemistry, *Pharmaceutics*, 17 (2025), art. no. 92
7. Tameni, G., Carollo, F., Cavazzini, A.M., Forzan, M., **Bernardo, E.**, Microwave assisted cold consolidation of alkali activated suspension of glass waste powders, *Materials Letters*, 389 (2025) art. no. 138354
8. Chauhan, A., **Bernardo, E.**, Galusek, D., Tailoring optical properties of (Ce,Pr)O<sub>2-δ</sub>·(La,Sm,Y)<sub>2</sub>O<sub>3</sub> high entropy oxides by substituting Pr with Gd or Dy for multi-wavelength emission applications, *Open Ceramics*, 21 (2025) art. no. 100730
9. Tameni, G., Lago, D., Kaňková, H., Buňová, L., Kraxner, J., Galusek, D., Dawson, D.M., Ashbrook, S.E., **Bernardo, E.**, Alkaline attack of boro-alumino-silicate glass: New insights of the molecular mechanism of cold consolidation and new applications, *Open Ceramics*, 21 (2025), art. no. 100726
10. Diamanti, V., Elsayed, H., **Bernardo, E.**, Hybrid direct ink writing of bioglass-calcite-carbon composite scaffolds supported by novel silicone-based emulsions. *Ceram. Int.*, 50 (2024), pp. 53646-54
11. Ramteke, D.D., Hujova, M., Kraxner, J., Galusek, D., Elsayed, H., Colombo, P., **Bernardo, E.**, Attack of discarded soda-lime glass with sodium aluminate for the manufacturing of sustainable geopolymer components, *Open Ceramics* 20 (2024)100709
12. Elsayed, H., Gobbin, F., Barci, A., **Bernardo, E.**, Colombo, P., Cold Consolidation of Pharmaceutical Waste Glass Powders Through Alkali Activation and Binder Jet 3D Printing. *Materials* 17 (2024) 5164.
13. Zafar, M.J., Elsayed, H., **Bernardo, E.**, Waste Glass Upcycling Supported by Alkali Activation: An Overview. *Materials* 17 (2024) 2169.
14. Mahmoud, M., Kraxner, J., Elsayed, H., Stabile, F.M., Micháľková, M., Galusek, D., **Bernardo, E.**, Enhanced methylene blue adsorption by double alkali activation of highly porous glass microspheres prepared from waste glass. *J. Mat. Sci.*, 59 (2024) pp. 73-85.
15. Mahmoud, M., Kraxner, J., Mehta, A., Elsayed, H., Galusek, D., **Bernardo, E.**, Upcycling waste derived glass into high-performance photocatalytic scaffolds by alkali activation and direct ink writing. *Heliyon*, 10 (2024) art. no. e24737.
16. Lei, S., Gao, H., Feng, R., Dai, H., **Bernardo, E.**, Zhang, H., Cheng, Z., Zhang, X., Deng, M., Li, P., Wang, L., Effect of calcination temperature on the activity of basalt tailings for the lightweight geopolymer from microwave curing. *Mater. Chem. Phys.*, 328 (2024) art. no. 129991.
17. Mehta, A., Ozog, P., Dasan, A., Kraxner, J., Elsayed, H., Grigolato, L., Galusek, D., **Bernardo, E.**, Low cost structured photocatalysts from stereolithography of colorless pharmaceutical glass. *J. Eur. Ceram. Soc.*, 44 (2024) pp. 5480-5489.
18. Zafar, M.J., Elsayed, H., **Bernardo, E.**, Waste Glass Upcycling Supported by Alkali Activation: An Overview. *Materials*, 17 (2024) art. no. 2169.
19. Mahmoud, M., Kraxner, J., Mehta, A., Elsayed, H., Galusek, D., **Bernardo, E.**, Alkali activation-induced cold consolidation of waste glass: Application in organic-free direct ink writing of photocatalytic dye destructors. *J. Eur. Ceram. Soc.*, 44 (2024) pp. 5449-5459.
20. Gamal Abd-Elsatar, A., Elsayed, H., Kanková, H., Hruška, B., Kraxner, J., **Bernardo, E.**, Galusek, D., Ion-exchange enhancement of borosilicate glass vials for pharmaceutical packaging. *Open Ceramics*, 20 (2024) art. no. 100689.
21. Dogrul, F., Nawaz, Q., Elsayed, H., Liverani, L., Galusek, D., **Bernardo, E.**, Boccaccini, A.R., Polymer-derived Biosilicate-C composite foams: In-vitro bioactivity, biocompatibility and antibacterial activity. *J. Eur. Ceram. Soc.*, 44 (2024) pp. 6124-6134.
22. Lago, D., Tameni, G., Kraxner, J., Galusek, D., **Bernardo, E.**, Cesium stabilization by engineered alkaline attack of glass for pharmaceutical containers. *Mater. Lett.*, 372 (2024) art. no. 137097.
23. Lago, D., Tameni, G., Zorzi, F., Kraxner, J., Galusek, D., **Bernardo, E.**, Novel cesium immobilization by alkali activation and cold consolidation of waste pharmaceutical glass. *Journal of Cleaner Production* 461 (2024) 142673.
24. Ourgessa, A.W., Kraxner, J., Elsayed, H., Galusek, D., **Bernardo, E.**, Sustainable construction materials from alkali-

- activated waste fiberglass and waste refractory. *Open Ceramics*, 20 (2024) art. no. 100678.
25. Cammelli, F., Tameni, G., **Bernardo, E.**, Sustainable stabilization of waste foundry sands in alkali activated glass-based matrices. *Case Studies in Constr. Mater.* 21 (2024) e03538.
  26. Lei S., Gao H., Dai H., **Bernardo E.**, Zhang H., Yang Q., Zhang X., Wang L. Characteristics of lightweight geopolymers from microwave curing of basalt and waste glass powder mixtures (2023) *Constr. Build. Mat.* 409, art. no. 133758
  27. Mahmoud, M., Kraxner, J., Elsayed, H., **Bernardo, E.**, Galusek, D., Fabrication and environmental applications of glass microspheres: A review (2023) *Ceram. Int.*, 49, 39745–39759
  28. Elsayed, H., Stabile, F.M., Savio, G., **Bernardo, E.**, Masked stereolithography of wollastonite-diopside glass-ceramics from novel silicone-based liquid feedstock (2023) *Open Ceramics* 16, 100474
  29. Sivolella, S., Brunello, G., Nika, E., Badocco, D., Pastore, P., Carturan, S.M., **Bernardo, E.**, Elsayed, H., Biasetto, L., Brun, P., In vitro evaluation of granules obtained from 3D sphenic scaffolds and bovine bone grafts: chemical and biological assays (2023) *J. Mat. Chem. B* 11, 8775 - 8787
  30. Stabile, F.M., Famengo, A., Pedron, D., Elsayed, H., **Bernardo, E.** Functional bioglass/carbon nanocomposite scaffolds from vat photopolymerization of a novel preceramic polymer-based nanoemulsion (2023) *Additive Manufacturing*, 75, art. no. 103731
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