Chiara Vitale Brovarone

ResearcherID Scopus 6603151977 (138 papers, h-index 29, citation number 2371)

[redacted]

EDUCATION

Jan. 1998-Dec. 2000	PhD In Materials Engineering ï Politecnico di Milano, Italy (PhD supervisor Prof. P. Appendino), Thesis defense date: 5th March 2001
Sept.1992 ï Febr.1997	Master Degree in Materials Engineering, Politecnico di Torino, Italy

CURRENT AND PREVIOUS POSITIONS

Since April 2017	Full Professorship Habilitation for 09/D1, ING-IND/22
Since Nov. 2014	Associate Professor in Materials Science and Technology, Politecnico di Torino, Applied Science and Technology Department
Jan. 2005 ï Oct. 2014	Assistant Professor in Materials Science and Technology, Politecnico di Torino
Jan. 2001- Dec. 2004	Lecturer (ñRicercatore a tempo determinatoò) in Materials Science and Technology, Politecnico di Torino

FELLOWSHIPS AND AWARDS

Oct. 1999 - March 2000	**Fellowship** at the Lawrence Berkeley National Laboratory- Berkeley-California-USA. Supervision: Prof. A.P. Tomsia and Prof. E. Saiz (6 months)
Febr. 1996 - June 1996	**Scholarship** at the Ecole de Chimie de Montpellier, Master Science Degree Thesis-Montpellier-France.
From 2006 up to 2012	She had won, every year, the Award for Outstanding Scientific Activity of Young Researchers, promoted by Politecnico di Torino for researchers under 40 years.
MATCh Project	MATCh project (GA 286548, http://www.match-euproject.com), coordinated by the PI, is a European Project that achieved outstanding results and was awarded by the European Commission as **SUCCESS CASE HISTORY.**
	Recently it has been highlighted in the news of the American Ceramic Society (http://ceramics.org/ceramic-tech-today/biomaterials/biocompatible-glass-ceramic-implants-may-help-hips-live-past-expiration-dates) and in the press release of GTS (a UK SME specialised in glass production-http://www.glass-ts.com/news/pioneering-biocompatible-glass-ceramics-are-set-to-revolutionise-hip-joint-implants)

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

At present	Supervision of 4 PhD Students, 2 Post-docs and 2 lecturers**.**
Since 2010	Supervisor of 8 Doctoral Thesis.
Since 2000	Supervisor of over 50 Master Science Degree theses at Politecnico di Torino

TEACHING ACTIVITIES

Since 2017-2018	Chair in *Materials Engineering* for Master Degree in Material Engineering, 100 h/year (60 students)
2016-2017	Co-Chair in *Materials Engineering* for Master Degree in Material Engineering, 85 h/year (60 students)
Since 2012	Chair in *Engineering materials and surfaces for biomedical applications*, Master degree in Biomed Eng. (90 students), 30h/year, Politecnico di Torino
Since 2006	Chair in *Scaffold for tissue regeneration*, Course to PhD student in Biomedical Engineering and Materials Science, 20h
2002-2016	Chair in *Materials Science and Technology*, Bachelor degree in Mechanical Eng. (>200 student) and in Civil Eng. (>150 student), 60h/year each, Politecnico di Torino
2004 - 2011	Chair in *Biomaterials II*, Master degree in Biomedical Eng. (50students),60h/year, Politecnico di Torino

ORGANISATION OF SCIENTIFIC MEETINGS

2018	**BIOMAH conference** ñBiomaterials and Novel Technologies for Healthcare,ò Rome, October 2018, **International Scientific Committee**
2017	**Euromat 2017,** *Biomaterials for Tissue Engineering,* **Symposium Co-Organiser**
2016	**the BIOMAH conference** ñBiomaterials and Novel Technologies for Healthcare,ò Rome, October 2016**, International Scientific Committee**
2014	**Termis Conference** (10-15th June 2014), **Chairman and Organiser of the Symposium** ***ñ****Next-generation multifunctional bioceramics for targeted applications****ò***
2014	**EMR Fall Meeting** 15th-19th September, **Symposium co-organizer** ***ñ****Bioceramics for Bone and Joint Repair****ò***
2013	**ESB 2013**-Madrid, 11th September 2013, **co-organizer** of the Special Session ***ñ****Bioceramics for the future****ò***
2012	24th-25th October 2012, Torino-Sala Agorà (120 attendants), **Organiser** of the workshop ***ñ****Glasses and ceramics for biomedical applications****ò***

COMMISSIONS OF TRUST

Since 2010	Member of the Editorial Board of *Journal of Tissue Engineering*
Since 2012	Review panel member for the Ministry of Instruction
Since 2013	Member of the Editorial Board of Bioengineering (http://www.mdpi.com/journal/bioengineering/editors)
2012	24th-25th October 2012, Torino-Sala Agorà (120 attendants) **Organiser** of the workshop ***ñ****Glasses and ceramics for biomedical applications****ò***
2014	Bioceramics 26 (Scientific Committee Member)
2009	Istituto Ortopedico Rizzoli, Bologna-Italy Seminar ñGlasses and their biomedical applicationsò

Since 2000	Regular service as Peer-Reviewer for more than 20 international Journals including Acta Biomaterialia, Materials Letters, Journal of Material Science Materials in Medicine, Journal of the Royal Society Interface, Material Science Material Engineering C.

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

Since 2008	Member of the European Society for Biomaterials (ESB)
Since 2011	Member of the glasses for medicine and biotechnology (TC04) committee
Since 2013	Member of SIB (Italian Society for Biomaterials)
Since 2014	Member of ACerS (American Ceramic Society)
Since 2015	Member of AIMAT (Associazione Italiana Materiali)

MAJOR COLLABORATIONS

- Universidad Complutense de Madrid (Spain): drug release
- University of Sheffield (UK): wound healing
- CHARITE, Berlin (Germany): delayed bone healing
- University of Newcastle (UK): additive manufacturing, resorbable ceramics, injectable cements
- Imperial College (UK): bioactive glasses, porous scaffolds, coatings, co-culture
- Eastman Dental Institute (UK): resorbable phosphate glasses and fibers
- Erlangen University (Germany): mesoporous bioactive glasses,Micro-CT on porous structure
- Universitat Politecnica de Catalunya (Spain): bone cements
- FundacioCIM (Spain): additive manufacturing of biomaterials
- Jozef Stefane Institute (Slovenia): mesoporous glasses, TEM
- Technische Universitat Wien (Austria): mechanical modelling of 3D scaffolds
- Universidade de Evora (Portugal): biomaterials in vivo test on large animal models
- Karolinska Institutet (Sweden): in vitro and in vivo test on small animal models

- **FUNDED PROJECTS**

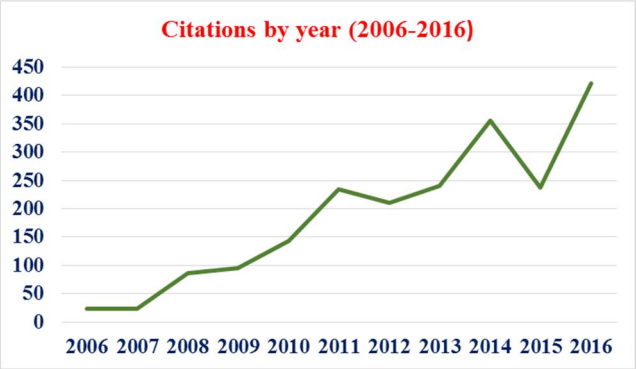
1. **PI of the ERC grant** - ñBiomimetic trick to re-balance osteoblasts-osteoclast loop in osteoporosis treatment: a topological and materials driven approachò- **1.977.500ú** (GA 681798), 1/05/2016-30/04/2021
2. **Coordinator** of the funded H2020-NMP6-2015 project MOZART ñMesopOrous matrices for localized pH-triggered release of therapeutic ions and drugsò (GA 685872 ï total funding **4.651.228,75ú;** funding for Politecnico di Torino **925 000 ú**) 1/11/2015-31/10/2019
3. **Coordinator** of the funded FP7-SME-2011 project MATCh ñMonoblock Acetabular cup with Trabecular-like Coatingsò (GA 286548, total budget **1.447.615,00** - funding for Politecnico di Torino **410 000ú**). The project has been awarded as *Success Case History*. 1/10/2011-30/09/2013.
4. **Scientific responsibility** for the Applied Science and Technology Department of Politecnico di Torino of MIND ñEngineering physiologically and pathologically relevant organ Models for the INvestigation of age related Diseasesò, funded by the Ministry of Instruction (MIUR). 1/02/2013-/31/01/2016
5. **Scientific responsibility** for the Applied Science and Technology Department of Politecnico di Torino of the project ñBioactive Bone Substitute-BBSò funded by the Piedmont Region (F.E.S.R. 2007/2013). 21/06/2012-20/12/2014.

6. **Scientific and administrative responsibility** of the industrial contract ñInjectable composite materials for the treatment of vertebral fracturesò funded by Bionica Tech s.r.l.
7. **Scientific responsibility** of the NMP.2011.2.1-1 funded Project ñResorbable Ceramic Biocomposites for Orthopaedic and Maxillofacial Applications-RESTORATIONò (GA 280575 **ï 500 613ú** on behalf of Bionica Tech s.r.l. and COREP s.r.l. 1/04/2012-31/03/2016, total funding 3 828 359ú).
8. **Coordinator** of the EU funded project ERG-BIORESS ñBioactive resorbable scaffolds for drug delivery in bone tissue engineeringò 2007-2010 (GA 280575).
9. **Coordinator** of the Funded Regional Project ñInorganic bioresorbable fibres for pheripheral nerve regenerationò, 2008.
10. **Coordinator** of the Funded Regional Project ñBioresorbable scaffolds for the regeneration of the muscoskeletal apparatusò, 2007.
11. **Coordinator** of the Funded Regional Project ñFuncionalisation of glass materials with antibacterial properties for osteosynthesis devicesò, 2004.
12. **Scientific responsibility** of the Young Researcher Project ñBioactive ceramics with controlled macroporosity for the in vivo regeneration of bone tissuesò, 2001.
13. **Scientific responsibility** of the Young Researcher Project ñSilver doped glasses with antibacterial and bioactive propertiesò, 2000.
14. **Co-Coordinator** of the project ñInnovative nanocomposites materials for abdominal repairò, 2007.
15. **Member of the Scaffolds working group in the frame of the COST Action** ñNew Generation biomimetic and customized implants for bone engineering-NEWGENò
16. **Unit Research member** of the FP7-PEOPLE-2010-ITN Funded Project, ñGlasses and Ceramic Composites for High Technology Applications-GLACERCoò (GA 264526).
17. **Unit Research member** of the Project ñArtificial staminal niches for cardiac tissue engineeringò funded by the Ministry of Instruction (MIUR), 2008.
18. **Sub-task leader** of the Biomaterial task in the frame of the Network of Excellence óKnowledge-based multicomponent materials for durable and safe performanceô (KMM-NoE) 2005-2008.
19. **Unit Research member of the Project** ñNanostructured Hydroxyapatite/zirconia composites for orthopaedics implantsò, 2004, funded by the Piedmont Region.
20. **Unit Research member** of the Project ñSynthesis and characterisation of silica based bioactive materialsò, funded by the Ministry of Instruction (MIUR), 2004.
21. **Unit Research member** ñInterface between silica based materials and biomoleculesò, funded by the Ministry of Instruction (MIUR), 2003.

TRACK-RECORD

Starting from 2007, I have supervised 8 PhD students and I am currently coordinating the research activity of the Biomaterials group at the Institute of Science and Engineering of Materials for innovative technologies (SIMTI) at the Applied Science and Technology Department of the Politecnico di Torino.
The group is currently formed by 2 Associate Professors, 2 Post-Docs, 4 PhD students and 2 lecturers.
The complete list of my publication can be found at the following link: https://www.scopus.com/authid/detail.uri?authorId=6603151977#.

I published my first journal article in 2000, 1 year before the completion of my PhD studies (2001). Collectively, according to SCOPUS (5/07/2017), I have published **138 papers** between 2000 and 2017. I am first author in 21 and senior author in 46 articles out of 138, which demonstrates my key role in conducting and leading a research. The total number of citations is **2371** with a steadily increasing number of citations reaching a maximum of 421 in 2016 and already 256 in the first 6 months of 2017 and yielding to a **h-index of 29.**



In April 2017 I obtained the Habilitation as Full Professor for the examination section 09/D1, ING-IND/22 (ñMaterials Science and Technologyò).
The Table below reports the thresholds needed for the Habilitation as Full Professor in 09/D1, ING-IND/22 (ñMaterials Science and Technologyò) and my indexes that where 2.5 to 5.5 times higher.

	Indicatore 1 (numero pubblicazioni)	Indicatore 2 (numero citazioni)	Indicatore 3 (h-index)
Valore soglia	**22**	**397**	**11**
Valore candidata	**94**	**2199**	**28**

My research activity is intensely inter- and multi-disciplinary and covers a wide range of topics, including the design, testing, modelling and validation of bioceramics and organic-inorganic composites in the form of coatings, porous scaffolds and cements for bone tissue engineering, mesoporous materials for controlled drug release, capsules for growth factors
and fibres for peripheral nerve regeneration and drug delivery.
My major research contributions can be summarized through a selection of the most significant papers of mine, listed hereunder with a concise description of the topic, novelty/importance in the field and remarks.
The papers are the results of ground-breaking, often pioneering research in the field of biomaterials, well beyond the state of the art.

PAPER	REMARKS
Vitale-Brovarone C *et al.*, *Development of glass-ceramic scaffolds for bone tissue engineering: 5haracterization, proliferation of human osteoblasts and nodule formation.* **Acta Biomater 2007;3:199-208.**	First author, **IF = 5.684, Cited 151 times** This is one of the **two pioneering papers** reporting the innovative application of sponge replica method to fabricate 3D porous bioactive glass-derived scaffolds for tissue engineering.
Baino F, Novajra G, Miguel-Pacheco V, Boccaccini AR, **Vitale-Brovarone C.** *Bioactive glasses: special application outside the skeletal system*, **J Non-Cryst Solid, 2016;432,15-30.**	Senior author, IF = 1.716, **INVITED REVIEW** This is one of the two reviews to be published in 2015 that complementarily covers bioactive glass applications outside the skeletal system. It provides interesting outlook towards the development of advanced multifunctional and multi-tissue engineering scaffolds.
Baino F, **Vitale-Brovarone C,** *Bioceramics in ophthalmology*. **Acta Biomater 2014;10:3372-3397.**	Senior author, **IF = 5.684** **Downloaded 1874 times in the first 9 months** from publication, which demonstrates the importance of the paper as well as the high interest by the scientific community. This is the first and so far the only review on bioceramics for ocular applications, it provides a prospect for future, ground-breaking research in the field. A further **invited review** on this topic was just published on Ceramics International (2015);41:5213-5231

Tallia F, Gallo M, Pontiroli L, Baino F, Firoilli S, Onida B, Anselmetti GC, Manca A, **Vitale-Brovarone C.** *Zirconia-containing radiopaque mesoporous bioactive glasses.* **Mater Lett 2014;130:281-284.**	Senior author, IF = 2.269 **Based on the PIôs European patent EP2569025** This is a pioneering paper, which reports for the first time the incorporation of zirconium as a radiopaque agent in a mesoporous bioactive glass. This activity is currently ongoing under the PIôs supervision in the frame of the EU-funded project RESTORATION.
PAPER	**REMARKS**
Vitale-Brovarone C et al., *Bioactive glass-derived trabecular coating: a smart solution for enhancing osteointegration of prosthetic elements.* **J Mater Sci Mater Med 2012;23:2369-2380.**	First author, **IF = 2.379, Cited 31 times** **Based on the PIôs European patent EP2152328, the pillar of the EU-funded project MATCh coordinated by the PI.** This pioneering paper reports the use of trabecular bioactive glass coatings on hip and knee joint prostheses to enhance osteointegration, disclosed in the PIôs EU patent
Vitale-Brovarone C, Novajra G, Lousteau J, Milanese D, Raimondo S, Fornaro M. *Phosphate glass fibres and their role in neuronal polarization and axonal growth direction.* **Acta Biomater 2012;8:1125-1136.**	First author, **IF = 5.684** This paper deals with the set-up of ad-hoc drawing procedures and biocompatibility studies of phosphate glass fibres with different degrees of solubility for use as solid or hollow guides for peripheral nerve regeneration and drug delivery.
Baino F, **Vitale-Brovarone C.** *Three-dimensional glass-derived scaffolds for bone tissue engineering: current trends and forecasts for the future.* **J Biomed Mater Res A 2011;97:514-535.**	Senior author, IF = 2.841, **cited 114 times** This is a comprehensive, highly cited, critical review on bioactive glass scaffolds for bone tissue engineering with emphasis on the processing-properties-performance relationships.
Renghini C, Komlev V, Fiori F, Verné E, Baino F, **Vitale-Brovarone C.** *Micro-CT studies on 3-D bioactive glass-ceramic scaffolds for bone regeneration.* **Acta Biomater 2009;5:1328-1337**	Senior author, **IF = 5.684**, cited 48 times This is the **first paper** in which micro-CT has been used to monitor the kinetics of apatite formation on the struts of bioactive glass scaffolds *in vitro*.
Vitale-Brovarone C, Baino F, Miola M, Mortera R, Onida B, Verné E. *Glass-ceramic scaffolds containing silica mesophases for bone grafting and drug delivery.* **J Mater Sci: Mater Med 2009;20:809-820.**	First author, IF = 2.379, cited 30 times This is the **first paper** that reports the development of a hierarchical macro-mesoporous scaffold obtained incorporating a mesoporous phase on a glass ceramic 3D scaffold.

MAJOR ACHIEVEMENTS

- April 2017, Habilitation as Full Professor (09/D1, ING-IND/22).
- PI of the ERC grant BOOSTñBiomimetic trick to re-balance osteoblasts-osteoclast loop in osteoporosis treatment: a topological and materials driven approachò- **1 977 500ú** (GA 681798), 1/05/2016-30/04/2021.
- Coordinator the H2020 funded project MOZART ñMesopOrous matrices for localized pH-triggered release of therapeutic ions and drugsò (GA 685872). Politecnico di Torino, **925 000ú (overall budget 4 651 229ú),** 1/11/2015-31/10/2019.
- Team leader of the RESTORATION Project (GA 280575) ñResorbable Ceramic Biocomposites for Orthopaedic and Maxillofacial Applicationò under my leadership funded in the frame of FP7-NMP-2011, **500 613ú (overall budget 3 828 359ú),** 1/04/2012-31/03/2016.
- In 2011-2013 I have co-ordinated the EU-funded project MATCh (Monoblock Acetabular Cup with Trabecular-like Coating, GA no. 286548), which was selected as a successful case history by the relevant EU Scientific Committee and has been recently published and highlighted in the news of the American

Ceramic Society (http://ceramics.org/ceramic-tech-today/biomaterials/biocompatible-glass-ceramic-implants-may-help-hips-live-past-expiration-dates).

- Reviewer for ERC-CoG-2016.

Invited talks	
10/2017	**ñSmart scaffold to fight bone ageingò**, 29th iSMIT (international Society for Medical Innovation and Technologyò
9/2017	Euromat 2017, **ñSmart scaffolds for osteoporotic fracturesò,** Salonicco (Grecia)
7/2017	**ñBioactive Materialsò** at *Materials Science and technologies approaches to biomedical challenges*, Ischia Porto Luglio 2017
5/2017	O.T.O.D.I. (Ortopedici e Traumatologi Ospedalieri dôItalia) 2017 **ñScaffold intelligenti per stimolare il micro ambiente osseoò** Loano
4/2017	Biovision 2017, ñThe BOOST Projectò, Lyon
11/2016	**ñLa cura dellôosteoporosi grazie a nuove tecniche di ingegneriaò** Rotary Club Torino Nord Ovest
10/2016	**"Multifunctional nanomaterials for smart release"** al BioMaH -Biomaterials for healthcare: Biomaterials for Tissue and Genetic Engineering and the Role of Nanotechnology- Roma
9/2016	**ñMixing the ingredients to obtain a ERC grant: my experience with BOOSTò** EORS 2016
3/2016	**ñTestimonianza sul progetto ERC BOOSTò**, Giornata ERC Salone dôOnore Castello del Valentino, Torino
11/2015	**ñMesoporous glasses as a smart platform for future, targeted therapies in pathological bone and skinò** EFOST 2015
01/2015	***ñMesoporous bioactive glass particles and their potential for bone regenerationò,*** Invited Lecture at the 39th International Conference and Exposition on Advanced Ceramics and Composites (ICACô15), Daytona Beach-Florida (USA)
07/2014	***ñBioactive glasses for tissue engineering and drug deliveryò,*** Invited lecture at the Workshop ñMaterials for Health: a Value Chain in the Frame of H2020ò, Torino-Italy
11/2013	***ñSmart monoblock acetabular cup with bioactive trabecular-like coatingò,*** Invited lecture at NIS Colloquium ñAdvance in biomaterials: combining simulation and experimentsò, Torino-Italy
2009	**ñGlasses and their biomedical applicationsò,** Invited seminar at Istituto Ortopedico Rizzoli ï Italy

PUBLICATION LIST (PAPERS with IMPACT FACTOR)

1. Falvo D'Urso Labate, G., Catapano, G., **Vitale-Brovarone, C.**, Baino, F.
   Quantifying the micro-architectural similarity of bioceramic scaffolds to bone
   (2017) Ceramics International, 43 (12), pp. 9443-9450.
   DOI: 10.1016/j.ceramint.2017.04.121

2. Molino, G., Bari, A., Baino, F., Fiorilli, S., **Vitale-Brovarone, C.**
   Electrophoretic deposition of spray-dried Sr-containing mesoporous bioactive glass spheres on glassï ceramic scaffolds for bone tissue regeneration

(2017) Journal of Materials Science, 52 (15), pp. 9103-9114.
DOI: 10.1007/s10853-017-1026-5

3. Pisano, R., Barresi, A.A., Capozzi, L.C., Novajra, G., Oddone, I., **Vitale-Brovarone, C.**
Characterization of the mass transfer of lyophilized products based on X-ray micro-computed tomography images
(2017) Drying Technology, 35 (8), pp. 933-938.
DOI: 10.1080/07373937.2016.1222540

4. Bari, A., Bloise, N., Fiorilli, S., Novajra, G., Vallet-Regí, M., Bruni, G., Torres-Pardo, A., González-Calbet, J.M., Visai, L., **Vitale-Brovarone, C.**
Copper-containing mesoporous bioactive glass nanoparticles as multifunctional agent for bone regeneration
(2017) Acta Biomaterialia, 55, pp. 493-504.
DOI: 10.1016/j.actbio.2017.04.012

5. Pontiroli, L., Dadkhah, M., Novajra, G., Tcacencu, I., Fiorilli, S., **Vitale-Brovarone, C.**
An aerosol-spray-assisted approach to produce mesoporous bioactive glass microspheres under mild acidic aqueous conditions
(2017) Materials Letters, 190, pp. 111-114.
DOI: 10.1016/j.matlet.2016.12.125

6. Baino, F., Montealegre, M.A., Orlygsson, G., Novajra, G., **Vitale-Brovarone, C.**
Bioactive glass coatings fabricated by laser cladding on ceramic acetabular cups: a proof-of-concept study
(2017) Journal of Materials Science, pp. 1-14. Article in Press.
DOI: 10.1007/s10853-017-0837-8

7. Dadkhah, M., Pontiroli, L., Fiorilli, S., Manca, A., Tallia, F., Tcacencu, I., **Vitale-Brovarone, C.**
Preparation and characterisation of an innovative injectable calcium sulphate based bone cement for vertebroplasty application
(2017) Journal of Materials Chemistry B, 5 (1), pp. 102-115.
DOI: 10.1039/c6tb02139e

8. Novajra, G., Baino, F., Raimondo, S., Lousteau, J., Milanese, D., **Vitale-Brovarone, C.**
Chapter 18: *Bioactive Glasses for Nerve Regeneration*
(2017) RSC Smart Materials, 2017-January (23), pp. 420-441.
DOI: 10.1039/9781782622017-00420

9. Tagliabue, S., Rossi, E., Baino, F., **Vitale-Brovarone, C.,** Gastaldi, D., Vena, P.
Micro-CT based finite element models for elastic properties of glassï ceramic scaffolds
(2017) Journal of the Mechanical Behavior of Biomedical Materials, 65, pp. 248-255.
DOI: 10.1016/j.jmbbm.2016.08.020

10. Milanese, D., Pugliese, D., Boetti, N.G., Ceci-Ginistrelli, E., Janner, D., Sglavo, V.M., **Vitale-Brovarone, C.,** Lousteau, J.
Phosphate glass fibers for optical amplifiers and biomedical applications
(2017) Optics InfoBase Conference Papers, Part F40-OFC 2017, 3 p.
DOI: 10.1364/OFC.2017.M2F.2

11. Iviglia, G., Cassinelli, C., Bollati, D., Baino, F., Torre, E., Morra, M., **Vitale-Brovarone, C.**
Engineered porous scaffolds for periprosthetic infection prevention
(2016) Materials Science and Engineering C, 68, pp. 701-715.
DOI: 10.1016/j.msec.2016.06.050

12. Iviglia, G., Cassinelli, C., Torre, E., Baino, F., Morra, M., **Vitale-Brovarone, C.**
Novel bioceramic-reinforced hydrogel for alveolar bone regeneration
(2016) Acta Biomaterialia, 44, pp. 97-109.
DOI: 10.1016/j.actbio.2016.08.012

13. Novajra, G., Boetti, N.G., Lousteau, J., Fiorilli, S., Milanese, D., **Vitale-Brovarone, C.**
Phosphate glass fibre scaffolds: Tailoring of the properties and enhancement of the bioactivity through mesoporous glass particles
(2016) Materials Science and Engineering C, 67, pp. 570-580.
DOI: 10.1016/j.msec.2016.05.048

14. Baino, F., Fiorilli, S., **Vitale-Brovarone, C.**
Bioactive glass-based materials with hierarchical porosity for medical applications: Review of recent advances
(2016) Acta Biomaterialia, 42, pp. 18-32.
DOI: 10.1016/j.actbio.2016.06.033

15. Chandrasekaran, A., Novajra, G., Carmagnola, I., Gentile, P., Fiorilli, S., Miola, M., Boregowda, M., Dakshanamoorthy, A., Ciardelli, G., **Vitale-Brovarone, C.**
Physico-chemical and biological studies on three-dimensional porous silk/spray-dried mesoporous bioactive glass scaffolds
(2016) Ceramics International, 42 (12), pp. 13761-13772.
DOI: 10.1016/j.ceramint.2016.05.176

16. Baino, F., Caddeo, S., Novajra, G., **Vitale-Brovarone, C.**
Using porous bioceramic scaffolds to model healthy and osteoporotic bone
(2016) Journal of the European Ceramic Society, 36 (9), pp. 2175-2182.
DOI: 10.1016/j.jeurceramsoc.2016.01.011

17. Shahgholi, M., Oliviero, S., Baino, F., **Vitale-Brovarone, C.**, Gastaldi, D., Vena, P.
Mechanical characterization of glass-ceramic scaffolds at multiple characteristic lengths through nanoindentation
(2016) Journal of the European Ceramic Society, 36 (9), pp. 2403-2409.
DOI: 10.1016/j.jeurceramsoc.2016.01.042

18. Boccardi, E., Philippart, A., Melli, V., Altomare, L., De Nardo, L., Novajra, G., **Vitale-Brovarone, C.**, Fey, T., Boccaccini, A.R.
Bioactivity and Mechanical Stability of 45S5 Bioactive Glass Scaffolds Based on Natural Marine Sponges
(2016) Annals of Biomedical Engineering, 44 (6), pp. 1881-1893.
DOI: 10.1007/s10439-016-1595-5

19. Baino, F., Novajra, G., Miguez-Pacheco, V., Boccaccini, A.R., **Vitale-Brovarone, C.**
Bioactive glasses: Special applications outside the skeletal system
(2016) Journal of Non-Crystalline Solids, 432, pp. 15-30.
DOI: 10.1016/j.jnoncrysol.2015.02.015

20. Oliveira, M.T., Potes, J., Queiroga, M.C., Castro, J.L., Pereira, A.F., Rehman, S., Dalgarno, K., Ramos, A., **Vitale-Brovarone, C**., Reis, J.C.
Percutaneous vertebroplasty: A new animal model
(2016) Spine Journal, Article in Press.
DOI: 10.1016/j.spinee.2016.06.011

21. Miola, M., Verné, E., **Vitale-Brovarone, C.,** Baino, F.
Antibacterial Bioglass-Derived Scaffolds: Innovative Synthesis Approach and Characterization

(2016) International Journal of Applied Glass Science, 7 (2), pp. 238-247.
DOI: 10.1111/ijag.12209

22. Baino, F., Marshall, M., Kirk, N., **Vitale-Brovarone, C.**
Design, selection and characterization of novel glasses and glass-ceramics for use in prosthetic applications
(2016) Ceramics International, 42 (1), pp. 1482-1491.
DOI: 10.1016/j.ceramint.2015.09.094

23. Fiorilli, S., Cauda, V., Pontiroli, L., **Vitale-Brovarone, C.**, Onida, B.
Aerosol-assisted synthesis of mesoporous aluminosilicate microspheres: The effect of the aluminum precursor
(2016) New Journal of Chemistry, 40 (5), pp. 4420-4427.
DOI: 10.1039/c5nj02825f

24. Ceci-Ginistrelli, E., Pugliese, D., Boetti, N.G., Novajra, G., Ambrosone, A., Lousteau, J., **Vitale-Brovarone, C.**, Abrate, S., Milanese, D.
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Autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae in base art. 13 del D. Lgs. 196/2003.

Torino, 5 luglio 2017

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