Updated on 22/05/2026

CURRICULUM VITAE ET STUDIORUM: PROF. Gianluca Malavasi

Personal data: Born in Modena (Italy), 21/07/1975

Present Position: Associate Professor from November 2014, Settore Concorsuale CHEM-3 (area CUN 3) SSD CHEM-03/A

Address: Via G. Campi 103, 41125, Modena. Phone: +39 0592058552

Email: gianluca.malavasi@unimore.it

Web site: https://unimore.unifind.cineca.it/get/person/090269

ResearchID: http://www.researcherid.com/rid/H-4658-2013

ORCID ID: orcid.org/0000-0002-4557-8135

EDUCATION

- **July 1999** Degree in Chemistry (110/110 summa cum laude) at the University of Modena and Reggio Emilia, Italy with a thesis entitled 'Polycarboxylate Zirconium (IV) complexes as raw materials for the preparation of pure ZrO_2', under the supervision of Prof. L. Menabue and Prof. M. Saladini.
- **April 2004** Ph. D. in Chemistry at Dept. of Chemistry, University of Modena and Reggio Emilia, Italy with a thesis entitled 'Synthesis, characterization and computational simulation of inorganic oxides', under the supervision of Prof. L. Menabue, Prof. M.C. Menziani and Prof. G. Lusvardi.

PREVIOUS POSITIONS AND FELLOWSHIPS

- **From April 2004 to December 2004.** Postdoctoral position at University of Modena e Reggio Emilia, Italy.
- **From January 2005 to October 2014.** Assistant Professor (CHIM03-General and Inorganic Chemistry) at the Dept. Of Chemistry, University of Modena and Reggio Emilia, Italy.

VISITS AND STAYS

- **September 2014 to December 2002** Visiting at Aberystwyth-University of Wales-U.K. in the labs of Prof. G.N. Greaves
- **September 2003** Visiting scientist at the Physical and Theoretical Chemistry Lab.- Oxford University-U.K. (Prof. P.A. Madden)

- **April 2014 to June 2014** Visiting Professor at the Department of Inorganic and Bioinorganic Chemistry of the Faculty of Pharmacy at Universidad Complutense de Madrid in the labs. of Prof. M. Vellet-Regi and Prof. A.J. Salinas (http://www.valletregigroup.com)

BRIEF DESCRIPTION OF THE RESEARCH ACTIVITY

My research activity is primarily focused on Inorganic Materials Chemistry, spanning advanced synthesis, multi-method characterization, and technological applications. My research is developed across three main pillars:

- Inorganic Oxides for Industrial & Ceramic Applications: Synthesis, characterization, and application of inorganic oxides (including functional nanoparticles, inorganic pigments, and phosphorescent aluminates), with a specific focus on the ceramic sector.

- Bioactive & Silica-Based Glasses: Synthesis (via melting, sol-gel, and EISA) and comprehensive characterization of silica-based and bioactive glasses. This line combines an integrated computational and experimental approach to evaluate material bioactivity and enzymatic-like activity.

- Sustainable & Innovative Agri-Chemical Systems: Development of low-environmental-impact fertilizer systems tailored for organic farming. This research aims to reduce chemical usage through the recycling of agro-industrial waste, utilize natural products/residues, boost plant defense and crop yield, optimize water and energy efficiency, and engineer controlled-release systems for micro and macro nutrients.

Core Expertise & Technical Skills

Synthesis Methodologies: Advanced wet-chemical synthesis (Sol-Gel, EISA), traditional and innovative Solid-State synthesis, and melt-quenching techniques.

Structural & Textural Analysis: Powder X-Ray Diffraction (PXRD), N2 adsorption (BET/textural analysis).

Thermal & Spectroscopic Characterization: Thermal analysis (TGA/DSC) and advanced spectroscopic techniques.

Computational Modeling: Classical Molecular Dynamics (MD) simulations of amorphous and disordered systems.

MAJOR COLLABORATIONS

- GM has established numerous national collaborations (Dip. di Chimica - Università di Torino, Dip. DiSCAFF – Piemonte Orientale, Dip. Di Scienze Agrarie – Università di Bologna, Scuola Normale Superiore di Pisa) ed international collaboration (Departamento do Quimica Inorganica y Bioinorganica - Universidad Complutense Madrid Gruppo Prof. M. Vallet-Regì e Prof. A.J. Salinas; Kazuo Inamori School of Engineering, New York State College of Ceramics Alfred University Gruppo Prof. A.N. Cormack; CEA, IRAMIS, Gif-sur-Yvette, France Gruppo Dr. T. Charpentier; Otto Schott Institute of Materials Research, Friedrich Schiller University Jena, Germany Gruppo Prof. Delia S. Brauer).

FUNDING AND PROJECTS

GM has participated and still participates in several national research projects (PRIN and Firb-Futuro in Ricerca) and regional (Spinner2013). He also received funding for his research from Fondazioni (Fondazione di Vignola) and from private companies through the signing of contracts and agreements.

TEACHING ACTIVITIES

- February 2003 – Tutor in the "I Scuola Nazionale in Simulazioni Computazionali Multiscala Applicate alle Scienze dei Materiali", Modena 17-21 Febbraio 2003
- February 2005 – Teacher in the "III Scuola Nazionale in Simulazioni Computazionali Multiscala Applicate alle Scienze dei Materiali", Modena 14-18 Febbraio 2005
- December 2005-April 2006 Teacher of the course "Chimica" for the CORSI ABILITANTI SPECIALI EX LEGGE 143/04
- June - September 2007 tutor in the CORSI ABILITANTI SPECIALI LEGGE 143/04 Decreto 85/2005
- Teacher of the courses: 1) 'Laboratorio di Chimica dei Materiali" al 3° anno della Laurea in Chimica (4 CFU); 2) Modulo nel corso di "Chimica" al 1° anno della Laurea Specialistica in Scienze per il recupero e la conservazione del patrimonio archeologico (2 CFU) (from the academic years 2004/2005 to 2006/2007).
- Teacher of the courses: 1) 'Chimica dei Materiali Inorganici e Laboratorio" al 3° anno della Laurea in Chimica (5 CFU); 2) Modulo nel corso di "Chimica" al 1° anno della Laurea Specialistica in Scienze per il recupero e la conservazione del patrimonio archeologico (2 CFU); 3) "Chimica Inorganica Applicata" al 3° anno della Laurea in Chimica (4 CFU). (in the academic year 2007/2008).

- Teacher of the courses: 1) 'Chimica dei Materiali Inorganici e Laboratorio" al 3° anno della Laurea in Chimica (5 CFU); 2) Modulo nel corso di "Chimica" al 1° anno della Laurea Specialistica in Scienze per il recupero e la conservazione del patrimonio archeologico (2 CFU); 3) "Chimica Inorganica Applicata" al 3° anno della Laurea in Chimica (4 CFU). 4) Modulo di laboratorio nel corso di "Chimica Generale e Inorganica" al 1° anno della Laurea in Chimica (3 CFU). (in the academic year 2008/2009).
- Teacher of the courses: 1) 'Chimica dei Materiali Inorganici e Laboratorio" al 3° anno della Laurea in Chimica (5 CFU). 2) "Chimica Inorganica Applicata" al 3° anno della Laurea in Chimica (4 CFU). 3) Modulo di laboratorio nel corso di "Chimica Generale e Inorganica" al 1° anno della Laurea in Chimica (3 CFU) (in the academic year 2009/2010).
- Tutor of the course: "Chimica Generale e Inorganica" al 1° anno della Laurea in Chimica (48 ore) (in the academic year 2010/2011).
- Teacher of the course: "Chimica Inorganica Industriale e Ambientale" al 3°anno della Laurea in Chimica (L-27) (48 ore, 6CFU) and tutor of the course "Chimica Generale e Inorganica" al 1° anno della Laurea in Chimica (48 ore, 3CFU). (in the academic year 2011/2012).
- Teacher of the courses: "Chimica Inorganica Industriale e Ambientale (48 ore, 6CFU)" al 3°anno and "Esercitazioni di Chimica (24 ore, 3CFU)" al 1° anno della Laurea in Chimica (L-27) and tutor of the course "Chimica Generale e Inorganica" al 1° anno della Laurea in Chimica (48 ore, 3CFU). Teacher at TFA (Tirocini formativi attivi per la classe di concorso A013) (in the academic year 2012/2013).
- Teacher of the courses: "Chimica Generale e Inorganica" al 1° anno della Laurea in Chimica (60 ore, 6 CFU) and at PAS 2014 (Percorsi abilitanti speciali per le classi di concorso A013, A012 e C240) (in the academic year 2013/2014).
- Teacher of the courses: "Chimica Generale e Inorganica" al 1° anno della Laurea in Chimica (60 ore, 6CFU) and at TFA 2014-15 (Tirocini Formativi Abilitanti per le classi di concorso A013 e A012) (in the academic year 2013/2014).
- Teacher of the courses: "Chimica Generale e Inorganica" al 1° anno della Laurea in Chimica (36 ore, 3CFU) and "Chimica" 8CFU 1° anno della Laurea in Scienze Naturali (64 ore) (in the academic year 2015/2016).
- Teacher of the courses: "Laboratorio di Chimica Generale e Inorganica" al 1° anno della Laurea in Chimica (36 ore – 3CFU), and "Chimica" 8CFU 1° anno della Laurea in Scienze Naturali (64 ore). (in the academic year 2016/2017).
- Teacher of the courses: "Laboratorio di Chimica Generale e Inorganica" al 1° anno della Laurea in Chimica (36 ore – 3CFU), "Chimica" 8 CFU al 1° anno della Laurea in Scienze Naturali (68

ore), Chimica Generale (8 ore, 1CFU) - "Chimica e Biochimica" nel CdL in Tecniche di Laboratorio Biomedico (from the academic years 2017/20185 to 2018/2019).

- Teacher of the courses: "Chimica" 9 CFU al 1° anno della Laurea in Scienze Naturali (92 ore), Modulo di Chimica Generale (8 ore, 1CFU) - "Chimica e Biochimica" nel CdL in Tecniche di Laboratorio Biomedico, "Stato Solido" 6CFU (48 ore) al 2° della CdLM in Scienze Chimiche (in the academic year 2019/20-2021/22-2022/23).
- Teacher of the courses: "Chimica" 9 CFU al 1° anno della Laurea in Scienze Naturali (92 ore), "Chimica dei materiali ceramici e vetrosi tradizionali e avanzati" 6CFU (48 ore) al 2° della CdLM in Scienze Chimiche, "Laboratori disciplinari avanzati" 3 CFU (30 ore) and Valutazione e autovalutazione nella pratica laboratoriale 1 CFU (5 ore) al corso di Formazione iniziale insegnanti: SCIENZE E TECNOLOGIE CHIMICHE - Centro multidisciplinare per la formazione degli insegnanti (in the academic year 2023/24-2025/26).

SUPERVISION OF PhD STUDENTS AND POSTDOCTORAL FELLOWS

- GM has been supervisor of 6 PhD students.

ACADEMIC DUTIES

- Member of "Giunta del Dipartimento di Scienze Chimiche e Geologiche" 2015-2018, 2018-2021;
- Member of CP - Commissione paritetica del Dipartimento di Scienze Chimiche e Geologiche" 2018-2021
- President of the Degree Course in Chemistry and Chemical Sciences from the academic year 2021/2022 (from 1st November 2021)

AWARDS

- GM won the "best poster award" in the 9th World Biomaterials Congress (June 2012, Chengdoun, China), as a Co-author.
- The article entitled "Cerium-doped bioactive 45S5 glasses: spectroscopic, redox, bioactivity and biocatalytic properties" (Journal of Materials Science (2017) 52: 8845-8857) was selected from over 90 articles published in the volumes of the Journal of Materials Science as "August finalist" for the 2017 Cahn Prize (August 2017).
- GM won the "best oral presentation award" at the 19th International Conference on Chemistry and the Environment, Belgrade, Serbia, June 8-12, 2025, as co-author

MEMBERSHIPS AND APPOINTMENTS

- Member of the Division of Inorganic Chemistry of the Italian Chemical Society – SCI from 2002.
- Member of the Interuniversity Consortium of Science and Technology of Materials – INSTM from 2002
- Member of the Doctorate School 'Multiscale Modelling, Computational Simulations and Characterization in Materials and Life Science – M2CSC' of the University of Modena and Reggio Emilia (from the academic years 2005-2012)
- Member of the Doctorate School 'Models and Methods for Materials and Environmental Sciences – M3ES' of the University of Modena and Reggio Emilia (from the academic years 2013-2018 and 2020-2026)

ORGANIZATION OF SCIENTIFIC MEETINGS AND SCHOOLS

- Member of the Scientific committee of the workshop Winter Modelling (Modena, 13-14 Marzo 2104).
- Member of the editorial board of "Biomedical Glasses" journal, publisher DE GRUYTER OPEN (2014-2021).
- Member of the editorial board of "Materials" journal, publisher MDPI.

ACTIVITIES IN REFERRED PROPOSAL and SCIENTIFIC JOURNALS.

Referee of international journal of inorganic and material chemistry: J. Non-Crystalline Solids, Acta Biomaterialia, Applied Surface Science, Materials Science and Engineering C (ed. Elsevier), Advanced Engineering Materials (ed. Wiley), Journal of the Royal Society Interface (ed. RSC), Journal of Physical Chemistry (ACS). Member of the Editorial Board and Guest Editor of Materials (MDPI

I have been a referee for the grant proposals for the Executive Agency for Higher Education, Research - Development and Innovation Funding - Romanian Ministry of Education, Research, Youth and Sport (2011-2012, 2013-2014) and for Poland executive government agency of National Science Centre (Narodowe Centrum Nauki NCN; http://www.ncn.gov.pl) 2018.

SELECTED PRESENTATIONS

- *Oral communication at national congress*

1. XXX Congresso Nazionale di Chimica Inorganica, 15-19 Settembre 2002, Modena. CS-04: Na2O-CaO-SiO2-ZnO bioglasses: experimental and molecular dynamics simulation approach. G. Lusvardi, **G. Malavasi**, L. Menabue, M.C. Menziani.

2. XXI Congresso Nazionale della Società Chimica Italiana, 22-27 Giugno 2003, Torino. IN-CO-027: Rationalization of NMR data by MD simulation of amorphous system. G. Lusvardi, **G. Malavasi**, L. Menabue, M.C. Menziani, P. Mustarelli.

3. XXII Congresso Nazionale della Società Chimica Italiana, 10-15 Settembre 2006, Firenze. INO-O-20: Potential bioactive phospho-silicate glasses doped with Ag and Ce prepared by sol-gel route. G. Lusvardi, **G. Malavasi**, L. Menabue, M.C. Menziani, A. Pedone and U. Segre.

4. G.E.I.-E.R.A.2010-Giornate dell'Elettrochimica Italiana-Elettrochimica per il Recupero, Ambientale, 5-10 Settembre 2010, Modena. Study of self-diffusion process and ionic conduction of CaF2-phosphosilicate bioglasses. **G. Malavasi**

5. XXIV Congresso Nazionale della Società Chimica Italiana, 11-16 Settembre 2011, Lecce. INO-OR-07: Novel smart bio-materials: bioactive glasses containing metal nano-particles conjugated with molecules of biological interests. **G. Malavasi**, G. Lusvardi, L. Menabue, E. Ferrari, M. Saladini, V. Aina, C. Morterra, E. Laurenti, L. Bergandi, D. Ghigo (eISBN 978-88-8305-085-5)

6. XLI Congresso Nazionale della Divisione di Chimica Inorganica, 3-6 Settembre 2013, Parma. OC9: Towards the controlled release of metal nanoparticles from biomaterials: physico-chemical, morphological and bioactivity features of Cu-containing sol gel glasses. **Malavasi Gianluca**, Aina Valentina, Cerrato Giuseppina, Martra Gianmario, Lusvardi Gigliola, Menabue Ledi

7. X Convegno Nazionale sulla Scienza e Tecnologia dei Materiali, 28 Giugno – 1 Luglio 2015, Favignana (TP), Oral 38: Catalytic bioactive glasses: catalase mimetic activity, an example. **G. Malavasi.**

8. XXVI Congresso della Società Chimica Italiana, 10-14 Settembre 2017, Paestum (SA), INO-OR47: V. Nicolini, **G. Malavasi**, L. Menabue, G. Lusvardi, F. Benedetti, S. Valeri, P. Luches "Mesoporous bioactive glasses doped with cerium: investigation of catalase and SOD mimetic activities, and bioactivity"

- *Oral communication at International conference*

1. 10th International Ceramic Congress & 3rd Forum on New Materials-CIMTEC2002, 14-18 July 2002, Firenze, Italy. SI-2: L08: Zinc addition sodium-calcium-silicate bioglasses. Theoretical vs experimental results. G. Lusvardi, **G. Malavasi**, L. Menabue, M.C. Menziani.

2. 10th International Conference of the Physics of Non-Crystalline Solids, 13-17 July 2003, Parma, Italy. O101: A combined experimental and computational approach to (Na2O)1-x-CaO-(ZnO)x-2SiO2 (x=0, 0.20, 0.60 and 1) glasses characterization. G. Lusvardi, **G. Malavasi**, L. Menabue, M.C. Menziani, U. Segre, M.M. Carnasciali.

3. 3rd International Conference of Computational Modelling and Simulation of Material, 30 May-4 June 2004, Acireale (Catania), Italy. B-1: L12: CaO and ZnO in soda-silicate glasses: a molecular dynamic simulation study. G. Lusvardi, **G. Malavasi**, L. Menabue, M.C. Menziani.

4. IX Conference & Exhibition of the European Ceramic Society, 19-23 June 2005, Portoroz, Slovenia. A-T-O-31: Density of multicomponent silica-based potential bioglasses: Quantitative Structure-Property Relationships (QSPR) analysis. G. Lusvardi, **G. Malavasi**, L. Menabue, M.C. Menziani, A. Pedone, U. Segre.

5. XI International Congress on the Physics of Non-Crystalline Solids, 20 October – 2 November 2006, Rhodes, Greece. O-CM-2: Medium range order in phospho-silicate bioactive glasses: MAS NMR vs MD simulations. L. Linati, G. Lusvardi, **G. Malavasi**, L. Menabue, M.C. Menziani, P. Mustarelli, A. Pedone, U. Segre.

6. XII International Congress on the Physics of Non-Crystalline Solids, 10-13 September 2009, Iguacu Falls, Brazil. O115: Structural and Dynamical properties of CaF2-phosphosilicate glasses: an MD study. G. Lusvardi, **G. Malavasi**, L. Menabue, M.C. Menziani, A. Pedone.

7. 8th European Conference on Computational Chemistry, 25-28 August 2010, Lund, Sweden. OC-pag.15: Bioactive phospho-silicate glasses: a molecular dynamics simulation study using rigid ion and core shell models. Franchini M., G. Lusvardi, L. Menabue, **G. Malavasi**, M.C. Menziani, A. Pedone

8. 2018 Glass and Optical Materials Division (GOMD) Meeting, 20-24 May 2018, San Antonio, Texas, USA GOMD-S2-011-2018 pag. 17: Bioactive glasses modified by oxides with potential enzymatic-like activities. **G. Malavasi**, L. Menabue, G. Lusvardi.

- *Invited oral communication*

1. Giornata della Chimica in Emilia Romagna, 12-13 Maggio 2003, Modena, Italy. Synthesis, characterization and computational simulation of inorganic amorphous systems. G. Lusvardi, **G. Malavasi**, L. Menabue, M.C. Menziani.

2. Innovation days 2005, 10-12 May 2005, Palazzo Astoria, Fiorano Modenese, Modena, Italy. Computational simulations in the ceramic field. G. Lusvardi, **G. Malavasi**, L. Menabue, M.C. Menziani.

3. Joint NIS Colloquium – Centro Scansetti, 11-12 January 2007, Torino, Italy. A new strategy for bioactive glasses development. G. Lusvardi, **G. Malavasi**, L. Menabue, M.C. Menziani, A. Pedone, U. Segre.

4. 2° Forum Nazionale dei Giovani Ricercatori di Scienza e Ingegneria dei Materiali, 3-6 June 2008, Genova, Italy. Elucidation of the Structural Role of Fluorine in Potentially Bioactive Glasses by Experimental and Computational Investigation. **G. Malavasi**

5. NIS Colloquia "Advances in biomaterials: combining simulations and experiments", November 28-29, 2013, Torino, Italy. Bioactive glasses for a “smart” release. **G. Malavasi**.

6. 8ª Conferenza Chimica Sostenibile - Federchimica “Chimica, scienza e industria insieme”, 21 aprile 2021. “Sviluppo di nuove formulazioni per il trattamento superficiale di gres porcellanato: sinergia tra Zschimmer & Schwarz Ceramco e il Dipartimento di Scienze Chimiche e Geologiche – UNIMORE” - Roberto Ferrari e **Gianluca Malavasi**.

OTHER INFORMATION

BIBLIOMETRIC INDICATORS

From 2002 GM has published 103 papers on national and international journal (with ISSN) and books (with ISBN):

- **92** on **ISI Web** with h_index **37**, Sum of Times Cited **4682**, update 22/05/2026;
- **92** on **SCOPUS** with h_index **39**, Sum of Times Cited **5115**, update 22/02/2026;
- **100** in **SCHOLAR GOOGLE** with h_index **42** (i10-index 80), Sum of Times Cited **6416** update al 17/04/2026.

TECHNOLOGICAL TRANSFER

…

PUBLIC ENGAGEMENT

GM is involved in the Progetto Nazionale di Chimica del Piano Lauree Scientifiche (Modena local unit) from 2005.

LIST OF SCIENTIFIC PUBLICATIONS ON INTERNATIONAL JOURNALS

N°	Years	Papers on Journals
		Giulia Santunione, Gianluca Malavasi, Elisabetta Sgarbi, Martina Napolitano, Luisa Barbieri Comparing the effectiveness of two innovative slow-release fertilizers on chemical release dynamics and lettuce plant growth *Submitted to Journal of Soil Science and Plant Nutrition* Manuscript Number: JSSP-D-25-02902
		Martina Napolitano, Giulia Malvolti, Fernanda Andreola, Isabella Lancellotti, Gianluca Malavasi, Michelina Catauro, Antonio D'Angelo, Luisa Barbieri Scaling Up of a Lightweight Aggregates System Based on Recovery Raw Materials and with Fertilization Capacity: From Laboratory Prototype to Semi-Industrial Production *submitted to Applied Research* manuscript ID: 3644469**.**
92	**2026**	**Marco Bertani, Matilde Benassi, Lorenzo Gottardi, Gianluca Malavasi, Ashutosh Goel, and Alfonso Pedone** Integrating Artificial Intelligence with Experimental and Computational Materials Science to Predict Crystallization in Multicomponent Glasses *Acta Materialia,* 311, 122216. ISSN: 1359-6454 http://doi.org/10.1016/j.actamat.2026.122216. **I.F. 9.3**
91	**2025**	**Martina Napolitano, Gianluca Malavasi,[c] Daniele Malferrari, Giulio Galamini, Michelina Catauro, Veronica Viola, Fabrizio Marani, Luisa Barbieri** A New High-efficiency Fertilization System from Waste Materials for Soil Protection: Material Engineering, Chemical-Physical Characterization, Antibacterial and Agronomic Performances *Materials,* 18, 3492. ISSN 1996-1944 https://doi.org/10.3390/ma18153492 **I.F.3.2**
90	**2025**	**Galamini Giulio, Altimari Fabiana, Barbieri Luisa, Malavasi Gianluca, Malferrari Daniele** Potential of pumice scraps compared to zeolitized tuff for Mn2+ release in agricultural applications

		Microporous and Mesoporous Materials, 396, 113704 Print ISSN: 1387-1811 Online ISSN: 1873-3093 https://doi.org/10.1016/j.micromeso.2025.113704 **I.F. 4.8**
89	**2024**	**Francesco Colombo, Riccardo Fantini, Francesco Di Renzo, Gianluca Malavasi, Daniele Malferrari, Rossella Arletti** An insight into REEs recovery from spent fluorescent lamps: evaluation of the affinity of an NH4-13X zeolite towards Ce, La, Eu and Y *Waste Management,* 175, 339-347 ISSN: 0956-053X https://doi.org/10.1016/j.wasman.2024.01.023 **I.F. 8.100**
88	**2024**	**Debora Carrozza, Erika Ferrari, Gianluca Malavasi** [c] Very large pores mesoporous bioactive silicate glasses: comparison behaviour toward classical mesoporous bioactive glasses in term of drug loading/release and bioactivity *Materials,* 17, 373. ISSN: 1996-1944 https://doi.org/10.3390/ma17020373 **I.F. 3.748**
87	**2024**	**Matteo Abati, Altair T. Contreras Jaimes, Luca Rigamonti, Debora Carrozza, Gigliola Lusvardi, Delia S. Brauer, Gianluca Malavasi** [c] Assessing Mn as an antioxidant agent in bioactive glasses by quantification of catalase and superoxide dismutase enzymatic mimetic activities *Ceramics International,* 50, (2, Part A), 2574-2587. ISSN: 0272-8842 https://doi.org/10.1016/j.ceramint.2023.10.091 **I.F. 5.532**
86	**2023**	**Debora Carrozza, Gianluca Malavasi,** [c] **Erika Ferrari** Very large pores mesoporous silica as new candidate for delivery of big therapeutics molecules, such as pharmaceutical peptides *Materials*, 16, 4151. ISSN:1996-1944 https://doi.org/10.3390/ma16114151. **I.F. 3.748**
85	**2023**	**Maria Cristina Menziani, Debora Carrozza, Gianluca Malavasi,** [c] **Erika Ferrari** Alginate beads containing Cerium-doped mesoporous glass and Curcumin: delivery and stabilization of therapeutics *International Journal of Molecular Sciences*, 2023, 24, 880. ISSN: 1422-0067 https://doi.org/10.3390/ijms24010880 **I.F. 6.208**

84	**2022**	**Matteo Mari, Debora Carrozza, Gianluca Malavasi, Ettore Venturi, Giulia Avino, Pier Cesare Capponi, Michele Iori, Sara Rubagotti, Silvia Belluti, Mattia Asti and Erika Ferrari** Curcumin-Based Diketo Ligands for Ga^{3+}: Thermodynamic Investigation of Potential Metal-Based Drugs *Pharmaceuticals*, 15, 854. https://doi.org/10.3390/ph15070854 **I.F. 5.215**
83	**2022**	**Gianluca Malavasi, Alfonso Pedone** The Effect of the Incorporation of Catalase Mimetic Activity Cations on the Structural, Thermal and Chemical Durability Properties of the 45S5 Bioglass® *Acta Materialia,* 229, 117801. ISSN: 1359-6454 http://doi.org/10.1016/j.actamat.2022.117801 **I.F. 8.203**
82	**2021**	**Alfonso Zambon, Gianluca Malavasi, Annalisa Pallini, Francesca Fraulini, and Gigliola Lusvardi** Cerium Containing Bioactive Glasses: A Review *ACS Biomater. Sci. Eng.*, 7(9), 4388–4401. ISSN: 2373-9878 https://doi.org/10.1021/acsbiomaterials.1c00414 **I.F. 4.749**
81	**2020**	**Gianluca Malavasi,[c] Gigliola Lusvardi** Composition and morphology effects on catalase mimetic activity of potential bioactive glasses *Ceramics International, 46,* 25854-25864. ISSN: 0272-8842 doi:10.1016/j.ceramint.2020.07.067 **I.F. 3.830**
80	**2020**	**Francesco Ronchetti, Leonardo Piccinini, Manuela Deiana, Giuseppe Ciccarese, Valentina Vincenzi, Alessandro Aguzzoli, Gianluca Malavasi, Paolo Fabbri, Alessandro Corsini** Tracer test to assess flow and transport parameters of an earth slide: the Montecagno landslide case study (Italy) *Engineering Geology,* 275, 105749. ISSN: 0013-7952 doi:10.1016/j.enggeo.2020.105749 **I.F. 3.909**
79	**2020**	**Alexandre Anesi, Gianluca Malavasi, Luigi Chiarini, Roberta Salvatori, Gigliola Lusvardi**

		Cell evaluation of enduring self-regenerative antioxidant activity of cerium doped bioactive glasses *Materials*, 13(10), 2297. ISSN:1996-1944 doi:10.3390/ma13102297 **I.F. 3.057**
78	**2019**	**Luca Rigamonti, Alessandra Forni, Elena Cariati, Gianluca Malavasi, Alessandro Pasini** Solid-State Nonlinear Optical Properties of Mononuclear Copper (II) Complexes with Chiral Tridentate and Tetradentate Schiff Base Ligands *Materials*, 12(21*),* 3595. ISSN:1996-1944 doi:10.3390/ma12213595 **I.F. 3.057**
77	**2019**	**E. Varini, S. Sánchez-Salcedo, G. Malavasi, G. Lusvardi, M. Vallet-Regí, A.J. Salinas** Cerium (III) and (IV) containing mesoporous glasses/alginate beads for bone regeneration: bioactivity, biocompatibility and reactive oxygen species activity *Materials Science & Engineering C*, 105, 109971. ISSN: 0928-4931 doi:10.1016/j.msec.2019.109971 **I.F. 5.880**
76	**2019**	**Valentina Nicolini, Gianluca Malavasi,[c] Gigliola Lusvardi, Alfonso Zambon, Francesco Benedetti, Giuseppina Cerrato, Sergio Valeri, Paola Luches** Mesoporous bioactive glasses doped with cerium: investigation over enzymatic-like mimetic activities and bioactivity *Ceramics International,* 45 (16), 20910-20920. ISSN: 0272-8842 doi:10.1016/j.ceramint.2019.07.080 **I.F. 3.830**
75	**2019**	**Gianluca Malavasi,[c] Roberta Salvatori, Alfonso Zambon, Gigliola Lusvardi, Luca Rigamonti, Luigi Chiarini and Alexandre Anesi** Cytocompatibility of Potential Bioactive Cerium-Doped Glasses based on 45S5 *Materials,* 12(4), 594**.** ISSN:1996-1944 doi:10.3390/ma12040594 **I.F. 3.057**
74	**2019**	**Andrea Silvestri, Maria Laura Ligabue, Gianluca Malavasi and Gigliola Lusvardi** Preparation and Luminescence Properties of $Ba_5Si_8O_{21}$ Long Persistent Phosphors Doped with Rare-Earth Elements *Materials,* 12, 183. ISSN:1996-1944 doi:10.3390/ma12010183 **I.F. 3.057**

73	**2018**	**Francesco Benedetti, Lucia Amidani, Jacopo Stefano Pelli Cresi, Federico Boscherini, Sergio Valeri, Sergio D'Addato, Valentina Nicolini, Gianluca Malavasi and Paola Luches** Role of cerium oxide in bioactive glasses during catalytic dissociation of hydrogen peroxide *Phys. Chem. Chem. Phys.,* 20, 23507-23514. Print/online: ISSN 1463-9076 doi:10.1039/C8CP02271B **I.F. 3.906**
72	**2018**	**Alfonso Pedone; Francesco Tavanti; Gianluca Malavasi; Maria Cristina Menziani** An atomic-level look at the structure-property relationship of cerium-doped glasses using classical molecular dynamics *Journal of Non-Crystalline Solids,* 498, 331–337. ISSN: 0022-3093 doi:10.1016/j.jnoncrysol.2018.03.040 **I.F. 2.124**
71	**2018**	**Sanchez-Salcedo, S.; Malavasi, G.[c]; Salinas, A.J.; Lusvardi, G.; Rigamonti, L.; Menabue, L.; Vallet-Regi, M.** Highly-Bioreactive Silica-Based Mesoporous Bioactive Glasses Enriched with Gallium (III) *Materials*, 11, 367. ISSN:1996-1944 doi:10.3390/ma11030367 **I.F. 2.972**
70	**2017**	**Francesco Benedetti, Paola Luches, Sergio D'Addato, Sergio Valeri, Valentina Nicolini, Alfonso Pedone, Maria Cristina Menziani, Gianluca Malavasi** Structure of active cerium sites within bioactive glasses *Journal of the American Ceramic Society,* 100 (11), 5086-5095. Online ISSN: 1551-2916 (print) 0002-7820 (on-line) doi:10.1111/jace.15049 **I.F. 2.841**
69	**2017**	**Valentina Nicolini, Gianluca Malavasi[c], Ledi Menabue, Gigliola Lusvardi, Francesco Benedetti, Sergio Valeri, Paola Luches** Cerium-doped bioactive 45S5 glasses: spectroscopic, redox, bioactivity and biocatalytic properties *Journal of Materials Science,* 52, 8845-8857. ISSN: 0022-2461 (Print) 1573-4803 (Online) doi: 10.1007/s10853-017-0867-2 **I.F. 2.599**
68	**2016**	**Malavasi G, Nicolini V, Gambuzzi E, Menabue L, Menziani MC, Lusvardi G, Pedone A, Benedetti L, Luches P, D'Addato S, Valeri S.** Catalytic Bioactive Glasses: Catalase Mimetic Activity, An Example *J Appl Biomater Funct Mater,* 14(1), e84-e128.

		eISSN 2280-8000 doi:10.5301/jabfm.5000272 **I.F. 0.934**
67	**2016**	**Sanchez-Salcedo S, Salinas A, Vallet-Regi M, Malavasi G, Lusvardi G and Menabue L.** Development of mesoporous bioactive glasses able to release antibacterial Ga^{3+} ions. *Front. Bioeng. Biotechnol. Conference Abstract:10th World Biomaterials Congress* ISSN: 2296-4185 doi:10.3389/conf.FBIOE.2016.01.01476 **No ISI**
66	**2016**	**Valentina Nicolini, Monica Caselli, Erika Ferrari, Ledi Menabue, Gigliola Lusvardi, Monica Saladini and Gianluca Malavasi[c]** SiO_2-CaO-P_2O_5 Bioactive Glasses: A Promising Curcuminoids Delivery System *Materials,* 9, 290. ISSN:1996-1944 doi:10.3390/ma9040290 **I.F. 2.654**
66	**2016**	**Valentina Nicolini, Elena Varini, Gianluca Malavasi,[c] Ledi Menabue, Maria Cristina Menziani, Gigliola Lusvardi, Alfonso Pedone, Francesco Benedetti, Paola Luches** The effect of composition on structural, thermal, redox and bioactive properties of Ce-containing glasses *Materials & Design,* Vol. 97, pp. 141-148. ISSN: 0264-1275 doi:10.1016/j.matdes.2016.02.056 **I.F. 4.364**
65	**2016**	**Gigliola Lusvardi, Gianluca Malavasi, Ledi Menabue and Marco Smargiassi** Systematic investigation of the parameters that influence the luminescence properties of photoluminescent pigments *Journal of Luminescence*, Vol. 175, pp.73-85 ISSN: 0022-2313 doi:10.1016/j.jlumin.2016.02.038 **I.F. 2.693**
64	**2015**	**Nicolini, Valentina; Gambuzzi, Elisa; Malavasi, Gianluca,[c] Menabue, Ledi; Menziani, Maria Cristina; Lusvardi, Gigliola; Pedone, Alfonso; Benedetti, Francesco; Luches, Paola; D'Addato, Sergio; Valeri, Sergio** Evidence of Catalase Mimetic Activity in Ce^{3+}/Ce^{4+} Doped Bioactive Glasses *Journal of Physical Chemistry B,* Vol. 119 (10), pp. 4009-4019 ISSN: 1520-6106 doi:10.1021/jp511737b **I.F. 3.187**
63	**2014**	**Sandra Sánchez Salcedo, Shruti Shruti, Antonio J. Salinas, Gianluca Malavasi, Ledi Menabue, Maria Vallet-Regí**

		In vitro antibacterial capacity and cytocompatibility of SiO_2–CaO–P_2O_5 meso-macroporous glass scaffolds enriched with ZnO *Journal of Materials Chemistry B* Vol. 2, pp. 4836- 4847 **Print + Online:** ISSN 2050-750X doi:10.1039/C4TB00403E **I.F. 6.101**
62	**2014**	**Valentina Aina, Claudio Magistris, Giuseppina Cerrato, Gianmario Martra, Guido Viscardi, Gigliola Lusvardi, Gianluca Malavasi, Ledi Menabue** New formulation of functionalized bioactive glasses to be used as carriers for the development of a pH-stimuli responsive biomaterials for bone diseases *Langmuir* Vol. 30(16), pp. 4703-4715 ISSN (printed): 0743-7463. ISSN (electronic): 1520-5827 doi:10.1021/la5003989 **I.F. 4.187**
61	**2014**	**Valentina Aina, Claudio Magistris, Giuseppina Cerrato, Gianmario Martra, Guido Viscardi, Gigliola Lusvardi, Gianluca Malavasi, Ledi Menabue** Conjugation of amino-bioactive glasses with 5-aminofluorescein as probe molecule for the development of pH sensitive stimuli-responsive biomaterials *Journal of Materials Science: Materials in Medicine* ISSN (Print): 0957-4530, (Online): 1573-4838 doi:10.1007/s10856-014-5206-4 **I.F. 2.141**
60	**2013**	**V. Aina, G. Cerrato, G. Martra, G. Malavasi,[c] G. Lusvardi, L. Menabue** Towards the controlled release of metal nanoparticles from biomaterials:physico-chemical, morphological and bioactivity features of Cu-containing sol gel glasses *Applied Surface Science* Vol. 283, pp. 240-248 ISSN: 00169-4332 doi:10.1016/j.apsusc.2013.06.093 **I.F. 2.538**
59	**2013**	**G. Malavasi, L. Menabue, M.C. Menziani, A. Pedone, A.J. Salinas, M. Vallet-Regì** New insights into the bioactivity of SiO_2-CaO and SiO_2-CaO-P_2O_5 sol-gel glasses by molecular dynamics simulations *Journal of Sol-Gel Science and Technology* Vol. 67(1), pp. 208-219 ISSN (printed):0928-0707, (electronic):1573-4846 doi:10.1007/s10971-011-2453-4 **I.F. 1.547**
58	**2013**	**Shruti Shruti, Antonio J. Salinas, Erika Ferrari, Gianluca Malavasi,[c] Gigliola Lusvardi, Antonio L. Doadrio, Ledi Menabue, María Vallet-Regí**

		Curcumin release from cerium, gallium and zinc containing mesoporous bioactive glasses *Microporous & Mesoporous Materials* Vol. 180, pp. 92-101 ISSN: 1387-1811 doi:10.1016/j.micromeso.2013.06.014 **I.F. 3.209**
57	**2013**	**Gigliola Lusvardi, Gianluca Malavasi, Ledi Menabue, Shruti Shruti** Gallium-containing phosphosilicate glasses: Functionalization and vitro bioactivity *Materials Science and Engineering C* Vol. 33 , pp. 3190-3196 ISSN: 0928-493 doi:dx.doi.org/10.1016/j.msec.2013.03.046 **I.F. 2.736**
56	**2013**	**Malavasi Gianluca, Pedone Alfonso, Menziani Maria Cristina** Study of the Structural Role of Gallium and Aluminum in 45S5 Bioactive Glasses by Molecular Dynamics Simulations *Journal of Physical Chemistry B* Vol. 117 (15), pp. 4142-4150 Print Ed. ISSN: 1520-6106 Web Ed. ISSN: 1520-5207 doi:10.1021/jp400721g **I.F. 3.377**
55	**2013**	**V. Aina, G. Cerrato, G. Martra, L. Bergandi, C. Costamagna, D. Ghigo, G. Malavasi,[c] G. Lusvardi, L. Menabue** Gold-containing bioactive glasses: a solid-state synthesis to produce non-cytotoxic biomaterials for bone cells *Journal of the Royal Society Interface* 10, 20121040 ISSN(Print):1742-5689, (Online):1742-5662 doi:10.1098/rsif.2012.1040 **I.F. 3.856**
54	**2013**	**V. Aina, L. Bergandi, G. Lusvardi, G. Malavasi, F.E. Imrie, I.R. Gibson, G. Cerrato, D. Ghigo** Sr-containing hydroxyapatite: Morphologies of HA crystals and bioactivity on osteoblast cells *Materials Science and Engineering C* Vol. 33, pp.1132-1142 ISSN: 0928-493 doi:10.1016/j.msec.2012.12.005 **I.F. 2.736**
53	**2013**	**S. Shruti, A.J. Salinas, G. Lusvardi, G. Malavasi,[c] L. Menabue, M. Vallet-Regí** Mesoporous bioactive scaffolds prepared with cerium, gallium and zinc containing glasses *Acta Biomaterialia* Vol. 9, pp. 4836-4844 ISSN: 1742-7061 http://dx.doi.org/10.1016/j.actbio.2012.09.024 **I.F. 5.684**

52	**2012**	**V. Aina, G. Lusvardi, B. Annaz, I.R. Gibson, F.E. Imrie, G. Malavasi, L. Menabue, G. Cerrato, G. Martra** Magnesium- and strontium-co-substituted hydroxyapatite: the effects of doped-ions on the structure and chemico-physical properties *Journal of Materials Science: Materials in Medicine* Vol. 23 (12), pp. 2867-2879 ISSN (Print): 0957-4530, (Online):1573-4838 doi:10.1007/s10856-012-4767-3 **I.F. 2.141**
51	**2012**	**S. Shruti, A.J. Salinas, G. Malavasi,[c] G. Lusvardi, L. Menabue, C. Ferrara, P. Mustarelli, M. Vallet-Regì** Structural and in vitro study of cerium, gallium and zinc containing sol-gel bioactive glasses *Journal of Materials Chemistry* Vol. 22, pp. 13698-13706 ISSN: 0959-9428 doi:10.1039/C2JM31767B **I.F. 6.101**
50	**2012**	**M. Franchini, G. Lusvardi, G. Malavasi,[c] L. Menabue** Gallium-Containing Phosphosilicate Glasses: Synthesis and in-vitro Bioactivity *Materials Science and Engineering C* Vol. 32, pp. 1401-1406 ISSN: 0928-4931 doi:10.1016/j.msec.2012.04.016 **I.F. 2.404**
49	**2012**	**A. Bonici, G. Lusvardi, G. Malavasi, L. Menabue, A. Piva** Synthesis and characterization of bioactive glasses functionalized with Cu nanoparticles and organic molecules *Journal of European Ceramic Society* Vol. 32, pp. 2777-2783 ISSN: 0955-2219 doi:10.1016/j.jeurceramsoc.2012.02.058 **I.F. 2.360**
48	**2012**	**M. Cocchi, C. Durante, G. Lusvardi, G. Malavasi, L. Menabue** Evaluation of the behaviour of Fluoride-containing bioactive glasses: reactivity in a simulated body fluid solution assisted by multivariate data analysis *Journal of Materials Science: Materials in Medicine* Vol. 23, pp. 639-648 ISSN (Print): 0957-4530, (Online):1573-4838 doi:10.1007/s10856-011-4543-9 **I.F. 2.141**
47	**2012**	**A. Pedone, E. Gambuzzi, G. Malavasi, M.C. Menziani** First-Principles Simulations of the ^{27}Al and ^{17}O Solid State NMR spectra of a calcium alumino-silicate glass. *Theoretical Chemistry Accounts* Vol. 131, pp. 1147-1157

		ISSN: (print)1432-881X, (electronic)1432-2234 doi:10.1007/s00214-012-1147-5 **I.F. 2.233**
46	**2011**	**V. Aina, C. Morterra, G. Lusvardi, G. Malavasi, L. Menabue, S. Shruti, C. L. Bianchi, V. Bolis** Ga-modified (Si-Ca-P) sol-gel glasses: possible relationships between surface chemical properties and bioactivity. *Journal of Physical Chemistry C* Vol. 115, pp. 22461-22474 ISSN: 1932-7447 doi:10.1021/jp207217a **I.F. 4.805**
45	**2011**	**A.J. Salinas, S. Shruti, G. Malavasi, L. Menabue, M. Vallet-Regí** Substitutions of cerium, gallium and zinc in ordered mesoporous bioactive glasses *Acta Biomaterialia* Vol. 7, pp. 3452-3458 ISSN: 1742-7061 doi:10.1016/j.actbio.2011.05.033 **I.F. 4.865**
44	**2011**	**V. Aina, D. Ghigo, T. Marchis, G. Cerrato, E. Laurenti, C. Morterra, G. Malavasi, G. Lusvardi, L. Menabue, L. Bergandi** Novel bio-conjugate materials: soybean peroxidase immobilized on bioactive glasses containing Au nanoparticles *Journal of Materials Chemistry* Vol. 21 (29), pp. 10970-10981 ISSN: 0959-9428 doi:10.1039/c1jm10442j **I.F. 5.968**
43	**2011**	**L. Bergandi, V. Aina, G. Malavasi, C. Morterra, D. Ghigo** The toxic effect of fluoride on MG63 osteoblast cells is also dependent on the production of nitric oxide *Chemico-Biological Interactions* Vol. 190(2-3), pp.179-186 ISSN: 0009-2797 doi:10.1016/j.cbi.2011.02.003 **I.F. 2.865**
42	**2011**	**E. Ferrari, G. Lusvardi, V. Aina, G. Malavasi, F. Fantini, C. Morterra, F. Pignedoli, M. Saladini, L. Menabue** The role of coordination chemistry in the development of innovative Gallium-based bioceramics: the case of Curcumin *Journal of Materials Chemistry* Vol. 21, pp. 5027-5037 ISSN: 0959-9428 doi:10.1039/c0jm3421e **I.F. 5.968** (please search in ISI-db as gianluca m*)
41	**2011**	**V. Aina, F. Bonino, C. Morterra, M. Miola, C. Bianchi, G. Malavasi, M. Marchetti, V. Bolis**

		Zn-Substituted Sol-Gel (bioactive) Glasses. Influence of the Glass Chemical Composition on Nature and Activity of the Surface Layer *Journal of Physical Chemistry C* Vol. 115, pp. 2196–2210 ISSN: 1932-7447 doi:10.1021/jp1101708 **I.F. 4.805**
40	**2011**	**V. Aina, L. Bertinetti, G. Cerrato, M. Cerruti, G. Lusvardi, G. Malavasi, C. Morterra, L. Tacconi, L. Menabue** On the dissolution/reaction of small-grain Bioglass® 45S5 and F-modified bioactive glasses in artificial saliva (AS) *Applied Surface Science* Vol. 257, pp. 4185–4195 ISSN: 00169-4332 doi:10.1016/j.apsusc.2010.12.019 **I.F. 2.103**
39	**2010**	**V. Aina, T. Marchis, E. Laurenti, E. Diana, G. Lusvardi, G. Malavasi, L. Menabue, G. Cerrato, C. Morterra** Functionalization of sol gel bioactive glasses carrying Au nanoparticles: selective Au affinity for amino and thiol ligand groups *Langmuir* Vol. 26(24), pp. 18600–18605 ISSN (printed): 0743-7463. ISSN (electronic): 1520-5827 doi:10.1021/la1036647 **I.F. 4.268**
38	**2010**	**A. Pedone, T. Charpentier, G. Malavasi, M.C. Menziani** New insights into the Atomic Structure of 45S5 Bioglass® by means of Solid-State NMR Spectroscopy and Accurate First-Principles Simulations. *Chemistry of Materials* Vol. 22, pp. 5644-5652 ISSN: 0897-4756(printed) 1520-5002(electronic) doi:10.1021/cm102089c **I.F. 6.397**
37	**2010**	**G. Lusvardi, G. Malavasi, V. Aina, L. Bertinetti, G. Cerrato, G. Magnacca, C. Morterra, L. Menabue** Bioactive glasses containing Au nano-particles: effect of calcination temperature on structure, morphology and surface properties. *Langmuir* Vol. 26 (12), pp 10303–10314 ISSN (printed): 0743-7463. ISSN (elec.): 1520-5827 doi:10.1021/la100472p **I.F. 4.268**
36	**2010**	**Bergandi L., V. Aina, G. Malavasi, E. Aldieri, E. Laurenti, C. Morterra, D. Ghigo** Fluoride-containing bioactive glasses inhibit pentose phosphate oxidative pathway and glucose 6-phosphate dehydrogenase activity in human osteoblasts *Chemico-Biological Interactions* Vol. 183 (3), 1405-415

		ISSN: 0009-2797 doi:10.1016/j.cbi.2009.11.021 **I.F. 2.832**
35	**2010**	**M. Pota, A. Pedone, G. Malavasi, C. Durante, M. Cocchi, M.C. Menziani** Molecular Dynamics Simulations of Sodium Silicate Glasses: Optimization and Limits of the Computational Procedure *Computational Materials Science* Vol. 47, pp. 739–751 ISSN: 0927-0256 doi:10.1016/j.commatsci.2009.10.017 **I.F. 1.458**
34	**2009**	**M.C. Menziani, A. Pedone, G. Malavasi** Computational Insight into the Effect of CaO/MgO Substitution on the Structural Properties of Phospho-Silicate Bioactive Glasses *Journal of Physical Chemistry C* Vol. 13 (35), 15723-15730 ISSN: 1932-7447 doi:10.1021/jp904131t **I.F. 4.224**
33	**2009**	**G. Lusvardi, G. Malavasi, L. Menabue, V. Aina, C. Morterra** Fluoride-containing bioactive glasses: surface reactivity in simulated body solutions. *Acta Biomaterialia* Vol. 5, pp. 3548-3562. ISSN: 1742-7061 doi:10.1016/j.actbio.2009.06.009 **I.F. 3. 975**
32	**2009**	**G. Lusvardi, G. Malavasi, F. Tarsitano, L. Menabue, M.C. Menziani, A. Pedone** Quantitative Structure-Properties Relationships of Potentially Bioactive Fluoro Phospho-Silicate Glasses. *Journal of Physical Chemistry B* Vol. 113 (30), pp 10331–10338. ISSN: 1520-6106 doi:10.1021/jp809805z **I.F. 3.471**
31	**2009**	**V. Aina, G. Malavasi, A. Fiorio Pla, L. Munaron, C. Morterra** Zinc-containing bioactive glasses: surface reactivity and behaviour towards endothelial cells. *Acta Biomaterialia* Vol. 5, pp. 1211-1222. ISSN: 1742-7061 doi:10.1016/j.actbio.2008.10.020 **I.F. 3.975**
30	**2009**	**G. Lusvardi, D. Zaffe, L. Menabue, C. Bertoldi, G. Malavasi, U. Consolo** In vitro and in vivo behaviour of Zinc doped phospho-silicate glasses. *Acta Biomaterialia* Vol. 5, pp. 419-428. ISSN: 1742-7061 doi:10.1016/j.actbio.2008.07.007 **I.F. 3.975**
29	**2008**	**V. Aina, G. Magnacca, G. Cerrato, F. Bonino, G. Malavasi, C. Morterra**

		Fluoride-containing bioactive glasses: some aspects of reactivity in simulated body solutions. *Il Nuovo Cimento B* Vol. 123 B (10-11), pp. 1517-1528. ISSN: 1594-9982 (print ed.) 1826-9877 (elect. ed.) doi:10.1393/ncb/i2008-10720-6 **I.F. 0.238**
28	**2008**	**G. Lusvardi, G. Malavasi, M. Cortada, L. Menabue, M.C. Menziani, A. Pedone, U. Segre** Elucidation of the Structural Role of Fluorine in Potentially Bioactive Glasses by Experimental and Computational Investigation *Journal of Physical Chemistry B* Vol. 112 (40), pp. 12730-12739. ISSN: 1520-6106 doi:10.1021/jp803031z **I.F. 4.189**
27	**2008**	**E. Castellini, R. Andreoli, G. Malavasi, A. Pedone** Deflocculant effect on the surface properties of kaolinite investigated through malachite green adsorption. *Colloids and Surfaces A: Physiochemical and Engineering Aspects* Vol. 329, pp. 31-37. ISSN: 0927-7757 doi:10.1016/j.colsurfa.2008.06.045 **I.F. 1.926**
26	**2008**	**A. Pedone, G. Malavasi, M.C. Menziani, U. Segre, A.N. Cormack** The role of Magnesium in soda-lime glasses: insight into structural, transport and mechanical properties through computer simulations *Journal of Physical Chemistry C* Vol. 112 (29), pp. 11034-11041. ISSN: 1932-7447 doi:10.1021/jp801677 **I.F.3.396**
25	**2008**	**A. Pedone, G. Malavasi, A.N. Cormack, U. Segre, M.C. Menziani** Elastic and dynamical properties of alkali silicate glasses from computer simulations techniques. *Theoretical Chemistry Accounts* Vol. 120, pp. 557-564. ISSN: 1432-881x (print), 1432-2234 (electronic) doi:10.1007/s00214-008-0434-7 **I.F. 2.370**
24	**2008**	**M.C. Menziani, A.N. Cormack, A. Pedone, G. Malavasi, U. Segre** **Molecular dynamics of stress-strain behaviour of silica glass under tensile load.** *Chemistry of Materials* Vol. 20(13), pp. 4356-4366. ISSN: 0897-4756(printed) 1520-5002(electronic) doi:10.1021/cm800413v **I.F. 5.046**

23	**2008**	**G. Lusvardi, G. Malavasi, L. Menabue, M.C. Menziani, A. Pedone, U. Segre, V. Aina, A. Perardi, C. Morterra, Boccafoschi, S. Gatti, M. Bosetti, M. Cannas** Properties of zinc releasing surfaces for clinical application. *Journal of Biomaterials Applications* Vol. 22, pp. 505-526. ISSN: 0885-3282 doi:10.1177/0885328207079731 **I.F.1.635**
22	**2008**	**A. Pedone, G. Malavasi, U. Segre, M.C. Menziani, F. Musso, M. Corno, B. Civalleri, P. Ugliengo** FFSiOH: a new force field for silica polymorphs and their hydroxylated surfaces based on periodic B3LYP calculations. *Chemistry of Materials* Vol. 20(7), pp. 2522-2531. ISSN: 0897-4756(printed) 1520-5002(electronic) doi:10.1021/cm703437y **I.F. 5.046**
21	**2008**	**L. Linati, G. Lusvardi, G. Malavasi,[c] L. Menabue, M.C. Menziani, P. Mustarelli, A. Pedone, U. Segre** Medium-range order in phospho-silicate bioactive glasses: Insights from MAS-NMR spectra, chemical durability experiments and molecular dynamics simulations *Journal of Non-Crystalline Solids* Vol. 354, pp. 84-89. ISSN: 0022-3093 doi:10.1016/j.jnoncrysol.2007.06.76 **I.F.1.449**
20	**2007**	**G. Malavasi, G. Lusvardi, A. Pedone, M.C. Menziani, M. Dappiaggi, A. Gualtieri, L. Menabue** Crystallization kinetic of bioactive glasses in the ZnO-Na_2O-CaO-SiO_2 system. *Journal of Physical Chemistry A* Vol. 111, pp. 8401-8408. ISSN: 1089-5639 doi:10.1021/jp071528u **I.F. 2.918**
19	**2007**	**A. Pedone, G. Malavasi, A.N. Cormack, U. Segre, M.C. Menziani** Insight into elastic properties of binary alkali-silicate glasses; prediction and interpretation through atomistic simulation techniques. *Chemistry of Materials* Vol. 19(13), pp. 3144-3154. ISSN: 0897-4756(printed) 1520-5002(electronic) doi:10.1021/cm062619r **I.F. 4.883**
18	**2007**	**V. Aina, A. Perardi, L. Bergandi, G. Malavasi, L. Menabue, C. Morterra, D. Ghigo** Cytoxicity of zinc-containing bioactive glasses in contact with human osteoblasts. *Chemico-Biological Interaction* Vol. 167, pp. 207-218. ISSN: 0009-2797 doi:10.1016/j.cbi.2007.03.002 **I.F. 3.090**

17	**2007**	**A. Pedone, M. Corno, B. Civalleri, G. Malavasi, M.C. Menziani, U. Segre, P. Ugliengo** An *ab initio* parameterized interatomic force field for hydroxyapatite. *Journal of Materials Chemistry* Vol. 17(20), pp. 2061-2068. ISSN: 0959-9428 doi:10.1039/b617858h **I.F. 4.339**
16	**2007**	**G. Malavasi, M.C. Menziani, A. Pedone, B. Civalleri, M. Corno, P. Ugliengo** A computational multi-scale strategy of the study of amorphous materials. *Theoretical Chemistry Accounts* Vol. 117, pp. 933-942. ISSN: 1432-881x (print), 1432-2234 (electronic) doi:10.1007/s00214-006-0214-1 **I.F. 2.537**
15	**2007**	**C. Caselli, G. Lusvardi, G. Malavasi, L. Menabue, P. Miselli** Multi-technique approach to V-ZrSiO4 pigment characterization and synthesis optimization. *Journal of European Ceramic Society* Vol. 27(2-3), pp. 1743-1750. ISSN: 0955-2219 doi:10.1016/j.jeurceramsoc.2006.05.063 **I.F.1.562**
14	**2007**	**G. Lusvardi, G. Malavasi, L. Menabue, M.C. Menziani, A. Pedone, U. Segre** Density of multicomponent silica-based potential bioglasses: quantitative structure-property relationships (QSPR) analysis. *Journal of European Ceramic Society* Vol. 27(2-3), pp. 499-504. ISSN: 0955-2219 doi:10.1016/j.jeurceramsoc.2006.04.067 **I.F.1.562**
13	**2006**	**G. Malavasi, A. Pedone, M.C. Menziani** Towards a quantitative rationalization of multicomponent glass properties by means of Molecular Dynamics simulations. *Molecular Simulation* Vol. 32(12-13), pp. 1045-1055. ISSN: 0892-7022(print) 1029-0435(online) doi:1080/08927020600932793 **I.F.1.084**
12	**2006**	**A. Pedone, G. Malavasi, M.C. Menziani, A.N. Cormack, U. Segre** A new self-consistent empirical inter-atomic potential model for oxides, silicates and silica based glasses. *Journal of Physical Chemistry B* Vol. 110(24), pp.11780-11795. ISSN: 1520-6106. doi:10.1021/jp0611018 **I.F. 4.115**
11	**2006**	**G. Malavasi, M.C. Menziani, A. Pedone, U. Segre** Void size distribution in MD-modelled silica glass structures.

		Journal of Non-Crystalline Solids Vol. 352(3), pp. 285-296. ISSN: 0022-3093. doi:10.1016/j.jnoncrysol.2005.11.022 **I.F. 1.362**
10	**2005**	**G. Lusvardi, G. Malavasi, L. Menabue, M.C. Menziani, A. Pedone, U. Segre** A Computational Tool for the Prediction of Crystalline Phases Obtained from Controlled Crystallization of Glasses *Journal of Physical Chemistry B* Vol. 109(46), pp.21586-21592. ISSN: 1520-6106. doi: 10.1021/jp0546857 **I.F. 4.033**
9	**2005**	**E. Castellini, G. Lusvardi, G. Malavasi, L. Menabue** Thermodynamic aspects of the adsorption of hexametaphosphate on kaolinite. *Journal of Colloids and Interface Science* Vol. 292, pp. 322-329. ISSN: 0021-9797. doi: 10.1016/j.jcis.2005.05.065 **I.F. 2.023**
8	**2005**	**L. Linati, G. Lusvardi, G. Malavasi, L. Menabue, M.C. Menziani, P. Mustarelli, U. Segre** Qualitative and Quantitative Structure-Property Analysis of Multicomponent Potential Bioglasses. *Journal of Physical Chemistry B* Vol. 109(46), pp. 4989-4998. ISSN: 1520-6106. doi: 10.1021/jp046631n **I.F. 4.033**
7	**2004**	**S. Braccini, C. Leonelli, G. Lusvardi, G. Malavasi, L. Menabue** In vitro evaluation of zirconia nanopowders. *Key Engineering Materials* Vol. 254-256, pp. 899-902. ISSN: 1013-9826. **I.F. 0.278**
6	**2004**	**G. Lusvardi, G. Malavasi, L. Menabue, M.C. Menziani, U. Segre** Synthesis and in-vitro studies of phospho-silicate glasses doped with cerium and zinc oxides. *Journal of Applied Biomaterials & Biomechanics* Vol. 2, pp. 212. ISSN (on line): 1724-6024. **no ISI, I.F. 0.944** (in 2009)
5	**2004**	**G. Lusvardi, G. Malavasi, L. Menabue, M.C. Menziani, U. Segre, M.M. Carnasciali, A. Ubaldini** A combined experimental and computational approach to $(Na_2O)_{1-x}CaO(ZnO)_x2SiO_2$ glasses characterization. *Journal of Non-Crystalline Solids* Vol.345&346, pp.710-714. ISSN: 022-3093. doi: 10.1016/j.jnoncrysol.2004.08.153 **I.F. 1.433**

4	**2003**	**C. Leonelli, G. Lusvardi, G. Malavasi, L. Menabue, M. Tonelli** Synthesis and characterization of cerium-doped glasses and in vitro evaluation of bioactivity. *Journal of Non-Crystalline Solids* Vol. 316, pp. 198-216. ISSN: 0022-3093. **I.F. 1.563**
3	**2002**	**G. Lusvardi, G. Malavasi, L. Menabue, M.C. Menziani** Synthesis, characterization and molecular simulation of Na_2O-CaO-SiO_2-ZnO glasses. *Journal of Physical Chemistry B* Vol. 106, pp. 9753-9760. ISSN: 1520-6106. doi: 10.1021/jp020321s **I.F. 3.611**
2	**2002**	**G. Lusvardi, G. Malavasi, L. Menabue, M. Saladini** Removal of cadmium ion by means of synthetic hydroxyapatite. *Waste Management* Vol. 22, pp. 853-857. ISSN: 0956-053X. **I.F. 0.726**
1	**2002**	**G. Lusvardi, L. Menabue, G. Malavasi** In vitro characterization of phosphosilicate and silicate glasses doped with zinc oxide. *Materials Engineering* Vol. 13, pp. 79-88. ISSN: 1120-7302. **no ISI**

I.F.= Impact Factor (ISI)

c = Corresponding Author

BOOK CHAPTERS (WITHOUT IF, national and international)

N°	Years	Papers on books
12	2025	M. Napolitano, L. Barbieri, I. Lancellotti, G. Santunione, E. Sgarbi, F. Petrigliano, F. Zanardi, A. Bigi and G. Malavasi Bioremediation of high-nitrated nitrocellulose waste: A sustainable approach for environmental degradation at an industrial site In IVANČEV-TUMBAS, Ivana (ed.), BEŠKOSKI, Vladimir P. (ed.). 19th International Conference on Chemistry and the Environment - ICCE 2025: Environmental chemistry for sustainability: e-book of abstracts: Belgrade, Serbia, June 8-12, 2025. Serbian Chemical Society, 2025. Str. 67. ISBN 978-86-7132-088-7
11	2019	Cipriani A, Lugli F, Frank G.A. Verheijen, Daniele Brunelli, Andrea Marchetti, Gianluca Malavasi Le analisi di fosforo ed elementi leggeri nei suoli In "Una sosta lungo la via Emilia, tra selve e paludi. La mansio di Forum Gallorum a Castelfranco Emilia" (eds. S. Campagnari, F. Foroni, D. Neri, Nuova Tipografia), Volume 12 di DEA - documenti ed evidenze di archeologia, pp. 207-210. ISBN 978-8897550-76-1
10	2013	F.E. Imrie, V. Aina, G. Lusvardi, G. Malavasi, I.R. Gibson, G. Cerrato, B. Annaz Synthesis and Characterisation of Strontium and Magnesium Co-Substituted Biphasic Calcium Phosphates In Key Engineering Materials Vol. 529-530 (Bioceramics 24), pp. 88-93. ISBN:978-3-03785-517-1(print) / 978-3-03795-323-5 (cd) /978-3-03813-437-4 (e-book)
9	2012	G. Malavasi, G. Lusvardi, L. Menabue, E. Ferrari, M. Saladini,V. Aina, G. Martra, L. Bergandi, D. Ghigo, F. Valetti Novel smart bio-nanomaterials: bioactive glasses containing metal nano-particles conjugated with molecules of biological interest In Proceedings of Nanotech 2012, TechConnect World, Vol. 3, pp. 114-117, Ed. by CRC Press (Taylor&Francis Group) in 2012. ISBN 978-1-4665-6276-9, ISBN electronic:978-1-4665-6278-3
8	2009	V. Aina, L. Bergandi, F. Bonino, D. Ghigo, G. Lusvardi, G. Malavasi, L. Menabue, C. Morterra

		Bioactive phospho-silicate Glasses containing CaF_2: bioactivity test in Simulated Body fluids and Behavior Towards Osteoblast Cells In Ceramic, Cells and Tissues, "Surface-Reactive Biomaterials as Scaffolds and Coating: interaction with cells and tissues" pp. 243-249. Faenza, May 19-22, 2009. Ed. by A. Ravaglioli, A. Krajewski, CNR (ITALY). ISBN 978-88-8080-111-5
7	2008	G. Lusvardi, G. Malavasi, L. Menabue, M.C. Menziani A combined experimental-computational strategy for the design, synthesis and characterization of bioactive zinc-silicate glasses. In Key Engineering Materials Vol. 377 (Progress in Bioceramics), pp. 211-224. ISSN: 1013-9826 ISBN:0-87849-395-6 / 978-0-87849-395
6	2007	G. Lusvardi, G. Malavasi, L. Menabue, A.F. Gualtieri, C. Montanari Mineralogical and microstructural study of the phases developed during the hydration process of industrial cement mixtures. In Proceedings 10th ECERS Conference pp. 75-83 (2007). Ed. by J.G. Heinrich and C. Aneziris, Goller Verlag, Baden-Baden (Germany). ISBN: 3-87264-022-4
5	2006	G. Lusvardi, G. Malavasi, A. Pedone, L. Menabue, M.C. Menziani, V. Bolis, M. Bosetti, F. Boccafoschi, M. Cannas Cell configuration for focal adhesions in cells seeded onto Zinc-doped Silicate-Bioglass. In Ceramic, Cells and Tissues, "Materials for Scaffolding of Biologically engineered systems-Interface and Interactions on a Nanoscale" pp. 166-170. Faenza, May 23-27 2006. Ed. by A. Ravaglioli, A. Krajewski, CNR (ITALY). ISBN: 88-8080-071-x
4	2004	G. Lusvardi, G. Malavasi, L. Menabue, M.C. Menziani, U. Segre CaO and ZnO in soda-silicate glasses: a molecular dynamics simulation study and experimental characteriazation. In Vincenzini P., Lami A. Advances in Science and Technology (Vol. 42, pp. 127-134). Faenza: Techna Group srl (ITALY). ISBN: 88-86538-45-6
3	2003	F. Bondioli, S. Braccini, C. Leonelli, G.C. Pellacani, G. Lusvardi, G. Malavasi In vitro bioactivity testing of ZrO_2 nanopowders prepared by MW-assisted hydrothermal synthesis. In Borisenko V.E., Gaponenko S.V., Gurin V.S. Physics, Chemistry and Application of Nanostructures: Reviews and short notes to Nanomeeting 2003 (pp. 338-341).

		SINGAPORE: World Scientific Publishing Co. Pte. Ltd. (SINGAPORE). ISBN: 981-238-381-6.
2	2003	G. Lusvardi, G. Malavasi, L. Menabue, M.C. Menziani Zinc addition to sodium-calcium-silicate bioglasses. Theoretical vs experimental results. In Vincenzini P., Lami A. Advances in Science and Technology (Vol. 36, pp. 91-98). Faenza: Techna srl (ITALY). ISBN: 88-86538-38-3.
1	2003	G. Lusvardi, G. Malavasi, L. Menabue, M. Saladini Characterization and thermal behavior of fluoroapatite and Ti-alloy for orthopedic implants. In: P. Vincenzini, R. Barbucci. Advances in Science and Technology (Vol. 41, p. 187-194), Faenza: Techna Group srl (ITALY). ISBN: 88-86538-43-X

Modena, 17/04/2026 Signed