

CURRICULUM VITAE ET STUDIORUM: PROF. Gigliola Lusvardi



Personal data: Born in Reggio Emilia (RE), March 27, 1967

Present Position: Associate Professor in General and Inorganic Chemistry at the Department of Chemical and Geological Sciences of the University of Modena and Reggio Emilia since 1 November 2005.

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EDUCATION

- **July 1992** Degree in Chemistry at the University of Modena, with a thesis entitled “Reactivity and structural modifications of synthetic apatites, effect of cationic substituents” under the supervision of Prof. Ledi Menabue and Monica Saladini.
- **October 1996** PhD in Chemical Sciences (Parma, Modena e Ferrara consortium) with a thesis entitled “Reactivity of synthetic and biological hydroxyapatite and its applications: effect of the ions on the behaviour of synthetic and biological hydroxyapatite” under supervisor of Prof. Ledi Menabue

PREVIOUS POSITIONS AND FELLOSHIPS

- **From May 1996 to November 2001** Technical collaborator at the Department of Chemistry of University of Modena and Reggio Emilia
- **From November 2001 to November 2005** Associate Researcher (General and Inorganic Chemistry, CHIM03), at the Department of Chemistry of University of Modena and Reggio Emilia

- **From November 2005 to present**, Associate Professor at Department (General and Inorganic Chemistry, CHIM03), of Chemical and Geological Sciences, University of Modena and Reggio Emilia.
- **From 2017** qualified as Full Professor by ASN.

BRIEF DESCRIPTION OF THE RESEARCH ACTIVITY

The research of Prof. G. Lusvardi is mainly carried out in the field of inorganic materials, starting from their synthesis, functionalization and complete characterization from the qualitative and quantitative point of view.

The research activity can be summarized as:

- synthesis, characterization and functionalization of bioceramics
- treatment of waste containing asbestos
- materials for special applications

Synthesis, characterization and functionalization of bioceramics

The ceramic materials that can be used as biomaterials, are called bioceramics.

The attention of Prof G.Lusvardi was devoted initially on calcium phosphates (apatites) and later on glasses (silicates and phosphosilicates). As regards calcium phosphates (hydroxyapatite, fluoroapatite), it has assessed its stability against essential and toxic metal ions (copper, zinc, cadmium and lead). He also conducted a systematic study on the possible interactions and/or structural substitutions of calcium of the apatitic structure by strontium and magnesium to obtain composites that may have specific clinical applications

In the case of both silicate and phosphosilicate glasses, she focused on the development of synthesis and characterization of systems obtained from bioactive glasses, able to form of an apatitic layer at the interface between glass and living tissue. She focused on Melt-Quenching Glasses (MQGs), bioactive sol-gel (SGGs), and bioactive mesoporous glasses (MBGs) doped by inorganic therapeutic ions (TIIs) such as copper, zinc, gallium and cerium. She also studied their functionalization by metallic nanoparticles (gold, copper), organic

molecules (amino acids, polyphenol derivatives and drugs) and the suitable dimensions (meso and nanostructure) for specific applications (scaffolds, drug delivery systems, coatings). All these hybrid materials has been tested in several simulated biological environments to simulate different physiological conditions and Prof G-Lusvardi demonstrated that these materials have the characteristics to be proposed for the regeneration of both hard and soft tissues; the innovative aspect is to confer new properties (e.g. antibacterial, anti-inflammatory, antioxidant, anticancer) to a bioactive glass and obtain a material that can continue to be synergistically bioactive.

Treatment of waste containing asbestos

The management of waste containing asbestos is an extremely delicate practice for the nature of waste and for the attention given to it by the State and public opinion; over time the interest has shifted towards recovery methods that provide for the possibility of inerting asbestos through a crystallochemical conversion and obtain a material, which is harmless and can be recycled as End of Waste (EoW) in other industrial processes. Prof. G. Lusvardi therefore deals with the recycling of an EoW in ceramic mixtures for porcelain stoneware with variable compositions; such mixtures will be characterized by mineralogical, morphological, compositional and rheological analyses in order to verify if their performances and characteristics are compatible with market requirements. The study is conducted in compliance with the REACH and CLP regulations with a view to "no data no market" and also to ensure safety for users of this product. This is an activity that also falls within the themes of the circular economy: it represents a great opportunity in terms of occupational and economic development and also for the resolution of long-standing and serious problems such as waste management, the availability of raw materials, energy efficiency and huge expenditure on imports

Materials for special applications

Some studies are aimed at the development of silicate-based materials for sensor applications, in particular devoted to the determination of analytes in food matrices. These devices consist of a silicate-based matrix containing gold or copper nanoparticles. The silicate matrix is obtained by a sol-gel synthesis, which is a valid alternative to traditional synthesis processes and which allows to obtain a stable material over time and in the conditions of use. The presence of metallic nanoparticles will give to the device particular electrocatalytic properties aimed at the selective determination of sugars. In this research will be also studied the possibility of conducting sol-gel synthesis using new siloxane derivatives obtained through innovative synthesis approaches, with reduced environmental impact, that

make use of low-cost raw materials such as silica. A positive and potentially innovative aspect of this research is that in addition to achieving the final purpose, the results obtained will find interesting applications also in other sectors.

Among the materials studied by Prof.G.Lusvardi there are some that have specific properties in the field of inorganic pigments, in particular photoluminescent pigments. Thanks to the experience gained on inorganic materials also used as pigments, has developed the synthesis of photoluminescent pigments consisting of strontium aluminates doped with europium and dysprosium: it has also studied the photoluminescent properties and researched the optimal conditions for achieving and improving of the same. In this way a protocol is obtained that is able to highlight the necessary chemical-physical characteristics that allow to obtain long-lasting photoluminescent pigments.

Some inorganic materials that have been employed are those that are used for water cleaning treatments, in particular it has dealt with the development of the synthesis, the characterization of new products based on titanium oxide and silver nanoparticles

In carrying out his research activity he uses experimental techniques such as: X-ray Powder Diffraction combined with the use of the Rietveld method, Scanning Electron Microscopy, Transmission Electron Microscopy, Atomic Force Microscopy, UV/Vis spectroscopy, ICP spectroscopy and Thermal Analysis.

MAJOR COLLABORATIONS

- Dipartimento di Scienze Chimiche e Geologiche, Unimore (Prof A.Gualtieri, G.Malavasi, D.Malferrari, M.C.Menziani, A.Pedone, L.Tassi, A.Zambon)
- Dipartimento di Scienze e Vita, Unimore (Prof M.Rossi, Prof F.Pellati, Dott. S.Raimondi, Prof A. Amaretti)
- Dipartimento di Scienze Mediche e Chirurgiche Materno-Infantili e dell'Adulto, Unimore (Prof. U.Chiarini, Prof.A.Grande, Prof .A.Anesi, Dott. R.Salvatori)
- Dipartimento di Dipartimento di Chimica & Centro Interdipartimentale, "Nanostructured Interfaces and Surfaces" – NIS, Unito (Prof. G.Cerrato)
- Dipartimento di Scienze della Salute, UPO, (Prof Lia Rimondini, Dott. A.Cochis)
- University of Erlangen-Nuremberg-Germany (Prof. Dr.-Ing. habil. Aldo R. Boccaccini)
- Universidad Complutense Madrid, Spain (Prof. A. Salinas, M.Vallet-Regi)
- University of Surrey, Guildford, UK (Prof D. Carta)

FUNDING AND PROJECTS

Assigned on the basis of the peer external reviewing

- Participant to Progetto finalizzato CNR/MSTA II ,2000 sottoprogetto Biomateriali, National Coordinator Prof. Rolando Barbucci, "Rivestimenti innovativi a base di titanio e di apatite fluorurata per impianti ortopedici" Local Coordinator Prof. Arturo Pizzoferrato
- Participant to Progetto di ricerca industriale, 2002 "Determinazione quantitativa mediante metodo Rietveld delle fasi mineralogiche in una miscela cementizia durante le prime fasi d'idratazione", responsabile del progetto Prof. Ledi Menabue, (15000 €)
- Participant to PRIN01 (MIUR-UniMoRe; Cofin01) "Sintesi di nanoparticelle assistite da microonde (MW)" National Coordinator Prof. G.C. Pellacani. Sub-unità di ricerca di Modena "Nanomateriali come biomateriali". Local Coordinator Prof L. Menabue (44000 €)
- Participant to PRIN03 (MIUR-UniMoRe; Cofin03) "L'interfaccia fra materiali a base di silice e biomolecole e/o modelli cellulari" National Coordinator Prof. C. Morterra. Unità di Ricerca di Modena "Sintesi, caratterizzazione, reattività all'interfaccia di vetri a base di silice, approccio sperimentale e computazionale". Local Coordinator Prof L.Menabue (53600 €)
- Participant to PRIN06 (MIUR-UniMoRe; Cofin06) "Fenomeni d'interfaccia in materiali nanostrutturati biocompatibili a base di silice posti a contatto con sistemi biologici", National Coordinator Prof. C. Morterra. Unità di Ricerca di Modena "Studio sperimentale e computazionale dell'interfaccia fluido biologico-biovetro" Local Coordinator Prof L. Menabue (36350 €)
- Responsabile of Contributo per la Ricerca Scientifica e Tecnologica "Materiali per teranostica, progettazione e sintesi di sistemi contenenti nanoparticelle e molecole di interesse biologico," (Fondazione di Vignola, Co-finanziamento 26000 €)
- Responsabile of FAR2015 Dipartimentale "Sviluppo di materiali a base silicatica per applicazioni sensoristiche" (6296,3 €)
- Participant to Progetto ATOMO, Coordinator Prof T. Manfredini (Intermech-UNIMORE), Local coordinator Prof. L.Menabue (Intermech-UNIMORE), "Hybrid press-forming: innovativa tecnologia per la realizzazione di parti di classe A per l'industria

automotive, in materiale composito a matrice termoindurente (Press PrePreg forming) e amatrice termoplastica (innovativo RTM con resine termoplastiche) (23951 €)

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- Participant to FAR2016 Interdipartimentale, coordinator Prof A.Gualtieri, Fibre potential toxicity Index (FPTI). A quantitative model to evaluate the toxicity and pathogenicity of mineral fibres, including asbestos (70000 €)
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- Participant to PRIN, local coordinator, Prof A.Gualtieri, " FIBRES: a multidisciplinary mineralogical, crystal-chemical and biological project to amend the paradigm of toxicity and cancerogenicity of mineral fibres"(449000 €)
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- Responsible of Progetto Ministero Ambiente Tutela Territorio Mare "MINISTERO AMBIENTE TUTELA TERRITORIO MARE " Tecnologia di trattamento di rifiuti contenenti amianto (RCA) e riciclo per la produzione di piastrelle ceramiche di grande formato, nell'ottica di una economia circolare (125000 €)

Research Contracts:

- 2011 "Valutazione della sicurezza chimica di materie prime e prodotti finiti" Saint Gobain PCC ITALIA S.p.A, 4000 €
- 2012 Valutazione delle sicurezza chimica di materie prime" Saint Gobain PCC ITALIA S.p.A, 1000 €
- 2012 "Materiali nanostrutturati per applicazioni ambientali" Barchemicals s.r.l., 4000 €
- 2013 "Studio e caratterizzazioni di materiali per applicazioni fotoluminescenti" Brightmaterials, s.r.l., 6250 €
- 2014 "Caratterizzazione di materiali fotoluminescenti" Brightmaterials s.r.l., 3500 €
- 2015 "Studio morfologico di pigmenti" Sicer S.p.A, 1500 €
- 2015 "Studio e caratterizzazione di materiali vetrosi destinati al trattamento dell'acqua", Barchemicals s.r.l., 2500 €
- 2016 "Studio e caratterizzazione di materiali per applicazioni speciali", Emilsider Meccanica SPA, 2500 €
- 2016, "Studio morfologico di pigmenti", Bluenco s.r.l., 500 €
- 2017 "Risultato analisi quali-quantitativa di un rifiuto (CER 190305) proveniente da un impianto di inertizzazione RA.RI per identificare e quantificare l'ossido di Nichel (NiO) in forma cristallina. RA.RI. 1000 €
- 2018 "Optimization of the production process of films based on tobacco dust", Philips Morris, 42840 €

TEACHING ACTIVITIES

- a.a. 1992/1993, 1993/1994, 1994/1995, 1995/1996, teacher of "Esercitazioni di Stechiometria" (Diploma Universitario in Ingegneria Meccanica Facoltà di Ingegneria dell'Università di Modena e Reggio Emilia)
- a.a. 1996/1997, 1997/1998, 1998/1999, 1999/2000, 2000/2001, teaching activity as an expert in the subject for the SSD CHIM 03
- a.a. 2001/2002, 2002/2003, 2003/2004 teacher of "Laboratorio di Chimica Inorganica I" (C.L. Chimica)
- a.a. 2001/2002, 2002/2003, 2003/2004 teacher of "Stechiometria" (C.L. Scienze Biologiche)
- a.a. 2004/2005, 2005/2006 teacher of "Laboratorio di Chimica dei Materiali" (C.L. Chimica)
- a.a. 2004/2005, 2005/2006, 2006/2007, 2007/2008 teacher of "Chimica Generale" (C.L. Scienze Geologiche, Scienze Naturali e Scienze per l'Ambiente e Territorio)
- a.a. 2004/2005, 2005/2006, 2006/2007, 2007/2008 teacher of "Cristallochimica" (C.L. di Chimica)
- a.a. 2008/2009 – 2018 teacher of "Chimica Generale" (C.L. Scienze Geologiche) "Valutazione del rischio chimico nel laboratorio e nell'industria" (C.L. Chimica).
- a.a. 2008/2009 – present teacher of "Strutturistica Applicata" (C.L. Chimica).
- a.a. 2019– present teacher of "Chimica Inorganica I" (C.L. Chimica).
- a.a. 2001/2002, 2002/2003, 2003/2004, 2004/2005, 2005/2006, 2006/2007, 2007/2008: teacher, thesis relator, participant to the enabling commission for Scuola di Specializzazione per l'Istruzione Secondaria (SSIS), A013, A060, A059
- a.a. 2005/2006: teacher, thesis relator, participant to the enabling commission for Corsi Abilitanti Speciali ex Legge 143/04, A013, A060, A059
- a.a. 2011/2012: teacher, thesis relator, president of the enabling commission for Tirocini Formativi Attivi (TFA), A013
- a.a. 2013/2014: teacher, thesis relator, president of the enabling commission for Percorsi Abilitanti Speciali (PAS) A013, A012, C240
- a.a. 2014/2015: a.a. 2011/2012: teacher, thesis relator, president of the enabling commission for Tirocini Formativi Attivi (TFA), A013, A012
- a.a. 2011/2012, 2012/2013, 2013/2014, 2014/2015: teacher and member of council of II level Master "Gestione delle sostanze chimiche – REACH e CLP"
- Teacher of SicurMore
- Teacher of Emtask
- Member of "Tutor commission" of CdS of Chemistry course

- Relator of several thesis for students of Chemistry degree

SUPERVISION OF PhD STUDENTS AND POSTDOCTORAL FELLOWS

- from 2017 Supervisor of Ph.D. Student Dr.ssa Maria Ligabue
- from 2021 Supervisor of Ph.D. Student Dr.ssa Francesca Fraulini

ACADEMIC DUTIES

- Member of “Commissione RAMAQ Dipartimento di Scienze Chimiche e Geologiche”
- Member of “Commissione didattica di Ateneo”
- Member of council of PhD course “Models and Methods for Material and Environmental Sciences”

NATIONAL SCIENTIFIC ENABLING (ASN)

- April 2017: enabling of Full professor of General and Inorganic Chemistry, (CHIM03/03-B1)

MEMBERSHIPS AND APPOINTMENTS

- Member of the Doctorate School "Modellistica, Simulazione Computazionale e Caratterizzazione Multiscala per le Scienze dei Materiali e della Vita " dell'Università di Modena e Reggio Emilia., renamed from 2013 "Models and Methods for Material and Environmental Sciences";
- Member of the Division of Inorganic Chemistry of the Italian Chemical Society (SCI)
- Member of the Interuniversity Consortium INSTM

- Member of Spanish and European Network of Excellence for the Prevention and Treatment of Osteoporotic Fractures, “Ageing” (www.agening.net).
- Member of Centro di Ricerca Interdipartimentale sulla Sicurezza e Prevenzione dei Rischi” (CRIS) dell’Università degli studi di Modena e Reggio Emilia.

ORGANISATION OF SCIENTIFIC MEETINGS AND SCHOOLS

- Member of the Editorial Board and Guest Editor of Materials
- Member of Nanomed Platform (Unimore)

ACTIVITIES IN REFERRED SCIENTIFIC JOURNALS

- Reviewer for Mater Chem, J. Non-Cryst. Solids, Acta Biomat., J. of Phys. Chem., J.Am.Ceram. Society, Appl.Surf.Scie. Adv Powder Techno, Mat Sci & Eng C, Colloids and Surfaces B: Biointerfaces, Bioactive Materials, Mat. Chem. Phys., Colloids and Surfaces A: Physicochemical and Engineering Aspects, Surfaces & Coatings Technology, Construction and Building Materials, Frontiers, Scientific Reports
- Reviewer per Talent Research
- Reviewer for PON and FSC
- Reviewer for DFG, Deutsche Forschungsgemeinschaft (German Research Foundation)

OTHER ACTIVITIES

- REACH referent of Emilia Romagna
- Working group for Chemistry test, coordinator Prof.S.Zappoli (in collaboration with Consienze-Cisia)
- Dissemination activities for Scientific Degrees Project

SELECTED INVITED PRESENTATIONS

- “Per una cultura della prevenzione del rischio sismico in Italia”, 12 October 2012, Modena
- NCM12 – 12th International Conference on the Structure of Non Crystalline Materials, 7-12 July 2013, Riva del Garda (TN)
- NIS colloquium "Advances in biomaterials: combining simulations and experiments", 28-29 November 2013; Turin
- III International Symposium on Nanoparticles/Nanomaterials and Applications 22-25 January 2018, Lisbona
- 3rd BioMaH, Biomaterials and Novel Technologies for Healthcare, 13-16 October 2022, Rome

OTHER INFORMATIONS

Prof G.Lusvardi has published **113** products (Iris/Unimore) on international journal, books, patent.

89 publications with IF, **1** patent, **17** chapters in book with ISBN or ISSN, **8** proceedings or extended abstract

Scopus (85 products) h index = 31 citations = 2636

Web of Science (85 products) h index = 29 citations = 2389

Google scholar h index = 32 citations = 3193

LIST OF SCIENTIFIC PUBLICATIONS ON INTERNATIONAL JOURNALS WITH IF

1. Zambon A, Fraulini F, Raimondi S, Lusvardi G (2023), *Dual loaded Ce-MBGs with bioactivity, antioxidant and antibacterial properties*, **Ceramics International**, 10.1016/j.ceramint.2023.06.295.
2. Abati M, Contreras J A T, Rigamonti L, Carrozza D, Lusvardi G, Brauer D, Malavasi G, (2023). *Assessing Mn as an antioxidant agent in bioactive glasses by quantification of catalase and superoxide dismutase enzymatic mimetic activities*, **Ceramics International**, 10.1016/j.ceramint.2023.10.091

3. Fraulini F, Raimondi S, Candeliere F, Ranieri R, Zambon A, Lusvardi G (2023), *Ce-MBGs Loaded with Gentamicin: Characterization and In Vitro Evaluation*, **Journal of Functional Biomaterials**, 10.3390/jfb14030129.
4. Giordana A, Malandrino M, Zambon A, Lusvardi G, Operti L, Cerrato G. (2023), *Biostimulants derived from organic urban wastes and biomasses: An innovative approach*, **Frontiers in Chemistry**, 10.3389/fchem.2023.969865
5. Zambon, A., Fraulini, F.; Lusvardi, G. (2022), *Loading with Biomolecules modulates the antioxidant activity of cerium-doped Bioactive Glasses*, **ACS Biomaterials Science & Engineering**, 10.1021/acsbiomaterials.2c00283
6. Brunelli, A; Foscari A; Base G; Lusvardi G; Bettiola C.; Semenzin E; Marcomini A; Badetti E (2022), *Colloidal stability classification of TiO₂ nanoparticles in artificial and in natural waters by cluster analysis and a global stability index: Influence of standard and natural colloidal particle*, **Science of The Total Environment**, <http://dx.doi.org/10.1016/j.scitotenv.2022.154658>
7. Ligabue, M.L; Saburit, A.; Lusvardi, G.; Malferrari D.; Garcia-Ten, J.; Monfort, E. (2022), *Innovative use of thermally treated cement-asbestos in the production of foaming materials: Effect of composition, foaming agent, temperature and reaction time*, **Construction and building materials**, <https://doi.org/10.1016/j.conbuildmat.2022.127517>
8. Raimondi, S.; Zambon, A.; Ranieri, R.; Fraulini, F.; Amaretti, A.; Rossi, M.; Lusvardi, G. (2022), *Investigation on the antimicrobial properties of cerium-doped bioactive glasses*, **Journal of Biomedical Material Research-part A**, 1, doi.org/10.1002/jbm.a.37289
9. Zambon, A., Malavasi, G.; Pallini A.; Fraulini, F.; Lusvardi, G. (2021), *Cerium containing bioactive glasses-A review*, **ACS Biomaterials Science & Engineering**, 1, doi.org/10.1021/acsbiomaterials.1c00414
10. Malavasi, G., Lusvardi, G., (2020), *Composition and morphology effects on catalase mimetic activity of potential bioactive glasses*, **Ceramics International**, 46, <http://dx.doi.org/10.1016/j.ceramint.2020.07.067>
11. Anesi, A.; Malavasi, G.; Chiarini, L.; Salvatori, R.; Lusvardi, G. (2020), *Cell Proliferation to Evaluate Preliminarily the Presence of Enduring Self-Regenerative Antioxidant Activity in Cerium Doped Bioactive Glasses*, **Materials**, 13(10), <http://dx.doi.org/10.3390/ma12193267>
12. Ligabue, M. L., Gualtieri, A. F., Lassinantti Gualtieri, M., Malferrari, D., Lusvardi, G. (2020). *Recycling of thermally treated cement-asbestos for the production of porcelain stoneware slabs*. **Journal of Cleaner Production**, 247. <https://doi.org/10.1016/j.jclepro.2019.119084>
13. Gualtieri, A. F., Lusvardi, G., Pedone, A., Di Giuseppe, D., Zoboli, A., Mucci, A., Lassinantti Gualtieri, M. (2019). *Structure Model and Toxicity of the Product of Biodissolution of Chrysotile Asbestos in the Lungs*. **Chemical Research in Toxicology**, 32(10). <https://doi.org/10.1021/acs.chemrestox.9b00220>
14. Nicolini, V., Malavasi, G., Lusvardi, G., Zambon, A., Benedetti, F., Cerrato, G., Luches, P. (2019). *Mesoporous bioactive glasses doped with cerium: Investigation over enzymatic-like mimetic activities and bioactivity*. **Ceramics International**, 45(16). <https://doi.org/10.1016/j.ceramint.2019.07.080>

15. Malvasi, G., Salvatori, R., Zambon, A., Lusvardi, G., Rigamonti, L., Chiarini, L., & Anesi, A. (2019). *Cytocompatibility of potential bioactive cerium-doped glasses based on 45S5*. **Materials**, 12(4). <https://doi.org/10.3390/ma12040594>
16. Varini, E., Sánchez-Salcedo, S., Malvasi, G., Lusvardi, G., Vallet-Regí, M., & Salinas, A. J. (2019). *Cerium (III) and (IV) containing mesoporous glasses/alginate beads for bone regeneration: Bioactivity, biocompatibility and reactive oxygen species activity*. **Materials Science and Engineering C**, 105. <https://doi.org/10.1016/j.msec.2019.109971>
17. Gualtieri, A. F., Lusvardi, G., Zoboli, A., Di Giuseppe, D., & Lassinantti Gualtieri, M. (2019). *Biodurability and release of metals during the dissolution of chrysotile, crocidolite and fibrous erionite*. **Environmental Research**, 171. <https://doi.org/10.1016/j.envres.2019.01.011>
18. Silvestri, A., Ligabue, M. L., Malvasi, G., & Lusvardi, G. (2019). *Preparation and luminescence properties of Ba₅Si₈O₂₁ long persistent phosphors doped with rare-earth elements*. **Materials**, 12(1). <https://doi.org/10.3390/ma12010183>
19. Ligabue, M. L., Terzi, F., Zanardi, C., Lusvardi, G. (2019). *One-pot sonocatalyzed synthesis of sol-gel graphite electrodes containing gold nanoparticles for application in amperometric sensing*. **Journal of Materials Science**, 54(13). <https://doi.org/10.1007/s10853-019-03580-y>
20. Lusvardi, G., Stabellini, F. S., Salvatori, R. (2019). *P₂O₅-free cerium containing glasses: Bioactivity and cytocompatibility evaluation*. **Materials**, 12(19). <https://doi.org/10.3390/ma12193267>
21. Forte, L., Torricelli, P., Bonvicini, F., Boanini, E., Gentilomi, G. A., Lusvardi, G., Bigi, A. (2018). *Biomimetic fabrication of antibacterial calcium phosphates mediated by polydopamine*. **Journal of Inorganic Biochemistry**, 178. <https://doi.org/10.1016/j.jinorgbio.2017.10.004>
22. Sanchez-Salcedo, S., Malvasi, G., Salinas, A. J., Lusvardi, G., Rigamonti, L., Menabue, L., & Vallet-Regi, M. (2018). *Highly-bioreactive silica-based mesoporous bioactive glasses enriched with gallium(III)*. **Materials**, 11(3). <https://doi.org/10.3390/ma11030367>
23. Nicolini, V., Malvasi, G., Menabue, L., Lusvardi, G., Benedetti, F., Valeri, S., & Luches, P. (2017). *Cerium-doped bioactive 45S5 glasses: spectroscopic, redox, bioactivity and biocatalytic properties*. **Journal of Materials Science**, 52(15). <https://doi.org/10.1007/s10853-017-0867-2>
24. Lusvardi, G., Barani, C., Giubertoni, F., & Paganelli, G. (2017). *Synthesis and characterization of TiO₂ nanoparticles for the reduction of water pollutants*. **Materials**, 10(10). <https://doi.org/10.3390/ma10101208>
25. Nicolini, V., Varini, E., Malvasi, G., Menabue, L., Menziani, M. C., Lusvardi, G., Luches, P. (2016). *The effect of composition on structural, thermal, redox and bioactive properties of Ce-containing glasses*. **Materials and Design**, 97. <https://doi.org/10.1016/j.matdes.2016.02.056>

26. Nicolini, V., Caselli, M., Ferrari, E., Menabue, L., Lusvardi, G., Saladini, M., Malavasi, G. (2016). SiO₂-CaO-P₂O₅ bioactive glasses: *A promising curcuminoids delivery system*. **Materials**, 9(4). <https://doi.org/10.3390/ma9040290>
27. Lusvardi, G., Malavasi, G., Menabue, L., Smargiassi, M. (2016). *Systematic investigation of the parameters that influence the luminescence properties of photoluminescent pigments*. **Journal of Luminescence**, 175. <https://doi.org/10.1016/j.jlum.2016.02.038>
28. Malavasi G, Nicolini V, Gambuzzi E, Menabue L, Lusvardi G, Pedone A., Benedetti F, Luches P., D'Addato S., Valeri S. (2016). *Catalytic bioactive glasses: catalase mimetic activity*. **Journal of Applied Biomaterials & Functional Materials**, vol. 14, doi:10.5301/jabfm.5000272
29. Nicolini, V., Gambuzzi, E., Malavasi, G., Menabue, L., Menziani, M. C., Lusvardi, G., Valeri, S. (2015). *Evidence of catalase mimetic activity in Ce³⁺/Ce⁴⁺ doped bioactive glasses*. **Journal of Physical Chemistry B**, 119(10). <https://doi.org/10.1021/jp511737b>
30. Chouat, N., Hasnaoui, M. A., Sassi, M., Bengueddach, A., Lusvardi, G., & Cornia, A. (2015). *Crystal structure of a new homochiral one-dimensional zincophosphate containing L-methionine*. **Acta Crystallographica Section E: Crystallographic Communications**, 71(7). <https://doi.org/10.1107/S2056989015011561>
31. Aina, V., Magistris, C., Cerrato, G., Martra, G., Viscardi, G., Lusvardi, G., Menabue, L. (2014). *New formulation of functionalized bioactive glasses to be used as carriers for the development of pH-stimuli responsive biomaterials for bone diseases*. **Langmuir**, 30(16). <https://doi.org/10.1021/la5003989>
32. Aina, V., Malavasi, G., Magistris, C., Cerrato, G., Martra, G., Viscardi, G., Lusvardi, G. (2014). *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**, 25(10). <https://doi.org/10.1007/s10856-014-5206-4>
33. Aina, V., Cerrato, G., Martra, G., Bergandi, L., Costamagna, C., Ghigo, D., ... Menabue, L. (2013). *Gold-containing bioactive glasses: A solid state synthesis to produce alternative biomaterials for bone implantations*. **Journal of the Royal Society Interface**, 10(82). <https://doi.org/10.1098/rsif.2012.1040>
34. Aina, V., Bergandi, L., Lusvardi, G., Malavasi, G., Imrie, F. E., Gibson, I. R., Ghigo, D. (2013). *Sr-containing hydroxyapatite: Morphologies of HA crystals and bioactivity on osteoblast cells*. **Materials Science and Engineering C**, 33(3). <https://doi.org/10.1016/j.msec.2012.12.005>
35. Shruti, S., Salinas, A. J., Ferrari, E., Malavasi, G., Lusvardi, G., Doadrio, A. L., ... Vallet-Regi, M. (2013). *Curcumin release from cerium, gallium and zinc containing mesoporous bioactive glasses*. **Microporous and Mesoporous Materials**, 180. <https://doi.org/10.1016/j.micromeso.2013.06.014>

36. Shruti, S., Salinas, A. J., Lusvardi, G., Malavasi, G., Menabue, L., & Vallet-Regi, M. (2013). *Mesoporous bioactive scaffolds prepared with cerium-, gallium- and zinc-containing glasses*. **Acta Biomaterialia**, 9(1). <https://doi.org/10.1016/j.actbio.2012.09.024>
37. Aina, V., Cerrato, G., Martra, G., Malavasi, G., Lusvardi, G., & Menabue, L. (2013). *Towards the controlled release of metal nanoparticles from biomaterials: Physico-chemical, morphological and bioactivity features of Cu-containing sol-gel glasses*. **Applied Surface Science**, 283. <https://doi.org/10.1016/j.apsusc.2013.06.093>
38. Lusvardi, G., Malavasi, G., Menabue, L., & Shruti, S. (2013). *Gallium-containing phosphosilicate glasses: Functionalization and in-vitro bioactivity*. **Materials Science and Engineering C**, 33(6). <https://doi.org/10.1016/j.msec.2013.03.046>
39. Aina, V., Lusvardi, G., Annaz, B., Gibson, I. R., Imrie, F. E., Malavasi, G., Martra, G. (2012). *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**, 23(12). <https://doi.org/10.1007/s10856-012-4767-3>
40. Shruti, S., Salinas, A. J., Malavasi, G., Lusvardi, G., Menabue, L., Ferrara, C., ... Vallet-Regi, M. (2012). *Structural and in vitro study of cerium, gallium and zinc containing sol-gel bioactive glasses*. **Journal of Materials Chemistry**, 22(27). <https://doi.org/10.1039/c2jm31767b>
41. Bonici, A., Lusvardi, G., Malavasi, G., Menabue, L., & Piva, A. (2012). *Synthesis and characterization of bioactive glasses functionalized with Cu nanoparticles and organic molecules*. **Journal of the European Ceramic Society**, 32(11). <https://doi.org/10.1016/j.jeurceramsoc.2012.02.058>
42. Cocchi, M., Durante, C., Lusvardi, G., Malavasi, G., & Menabue, L. (2012). *Evaluation of the behaviour of fluorine-containing bioactive glasses: Reactivity in a simulated body fluid solution assisted by multivariate data analysis*. **Journal of Materials Science: Materials in Medicine**, 23(3). <https://doi.org/10.1007/s10856-011-4543-9>
43. Gualtieri, A. F., Viani, A., Sgarbi, G., & Lusvardi, G. (2012). *In vitro biodurability of the product of thermal transformation of cement-asbestos*. **Journal of Hazardous Materials**, 205–206. <https://doi.org/10.1016/j.jhazmat.2011.12.005>
44. Franchini, M., Lusvardi, G., Malavasi, G., & Menabue, L. (2012). *Gallium-containing phospho-silicate glasses: Synthesis and in vitro bioactivity*. **Materials Science and Engineering C**, 32(6). <https://doi.org/10.1016/j.msec.2012.04.016>
45. Aina, V., Ghigo, D., Marchis, T., Cerrato, G., Laurenti, E., Morterra, C., Bergandi, L. (2011). *Novel bio-conjugate materials: Soybean peroxidase immobilized on bioactive glasses containing Au nanoparticles*. **Journal of Materials Chemistry**, 21(29). <https://doi.org/10.1039/c1jm10442j>
46. Aina, V., Bertinetti, L., Cerrato, G., Cerruti, M., Lusvardi, G., Malavasi, G., Menabue, L. (2011). *On the dissolution/reaction of small-grain Bioglass® 45S5 and F-modified bioactive glasses in artificial saliva (AS)*. **Applied Surface Science**, 257(9). <https://doi.org/10.1016/j.apsusc.2010.12.019>

47. Gianluca, M., Erika, F., Gigliola, L., Valentina, A., Francesca, F., Claudio, M., Ledi, M. (2011). *The role of coordination chemistry in the development of innovative gallium-based bioceramics: The case of curcumin*. **Journal of Materials Chemistry**, 21(13). <https://doi.org/10.1039/c0jm03421e>
48. Gualtieri, A. F., Giacobbe, C., Sardisco, L., Saraceno, M., Lassinantti Gualtieri, M., Lusvardi, G., Zanatto, I. (2011). *Recycling of the product of thermal inertization of cement-asbestos for various industrial applications*. **Waste Management**, 31(1). <https://doi.org/10.1016/j.wasman.2010.07.006>
49. Aina, V., Morterra, C., Lusvardi, G., Malavasi, G., Menabue, L., Shruti, S., Bolis, V. (2011). *Ga-modified (Si-Ca-P) sol-gel glasses: Possible relationships between surface chemical properties and bioactivity*. **Journal of Physical Chemistry C**, 115(45). <https://doi.org/10.1021/jp207217a>
50. Gualtieri, A. F., Andreatti, G. B., Giacobbe, C., Lusvardi, G., & Viti, C. (2011). *Structural and spectroscopic characterization of anorthite synthesized from secondary raw materials*. **Periodico Di Mineralogia**, 80(2). <https://doi.org/10.2451/2011PM0018>
51. Aina, V., Marchis, T., Laurenti, E., Diana, E., Lusvardi, G., Malavasi, G., Morterra, C. (2010). *Functionalization of sol gel bioactive glasses carrying Au nanoparticles: Selective Au affinity for amino and thiol ligand groups*. **Langmuir**, 26(24). <https://doi.org/10.1021/la1036647>
52. Lusvardi, G., Malavasi, G., Aina, V., Bertinetti, L., Cerrato, G., Magnacca, G., Menabue, L. (2010). *Bioactive glasses containing Au nanoparticles. Effect of calcination temperature on structure, morphology, and surface properties*. **Langmuir**, 26(12). <https://doi.org/10.1021/la100472p>
53. Giantomassi, F., Gualtieri, A. F., Santarelli, L., Tomasetti, M., Lusvardi, G., Lucarini, G., Pugnali, A. (2010). *Biological effects and comparative cytotoxicity of thermal transformed asbestos-containing materials in a human alveolar epithelial cell line*. **Toxicology in Vitro**, 24(6). <https://doi.org/10.1016/j.tiv.2010.07.009>
54. Lusvardi, G., Zaffe, D., Menabue, L., Bertoldi, C., Malavasi, G., & Consolo, U. (2009). *In vitro and in vivo behaviour of zinc-doped phosphosilicate glasses*. **Acta Biomaterialia**, 5(1). <https://doi.org/10.1016/j.actbio.2008.07.007>
55. Lusvardi, G., Malavasi, G., Tarsitano, F., Menabue, L., Menziani, M. C., & Pedone, A. (2009). *Quantitative structure-property relationships of potentially bioactive fluoro phospho-silicate glasses*. **Journal of Physical Chemistry B**, 113(30). <https://doi.org/10.1021/jp809805z>
56. Lusvardi, G., Malavasi, G., Menabue, L., Aina, V., & Morterra, C. (2009). *Fluoride-containing bioactive glasses: Surface reactivity in simulated body fluids solutions*. **Acta Biomaterialia**, 5(9). <https://doi.org/10.1016/j.actbio.2009.06.009>
57. Lusvardi, G., Malavasi, G., Menabue, L., Menziani, M. C., Pedone, A., Segre, U., Cannas, M. (2008). *Properties of zinc releasing surfaces for clinical applications*. **Journal of Biomaterials Applications**

58. Linati, L., Lusvardi, G., Malavasi, G., Menabue, L., Menziani, M. C., Mustarelli, P., Segre, U. (2008). *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**, 354(2–9). <https://doi.org/10.1016/j.jnoncrysol.2007.06.076>
59. Lusvardi, G., Malavasi, G., Cortada, M., Menabue, L., Menziani, M. C., Pedone, A., & Segre, U. (2008). *Elucidation of the structural role of fluorine in potentially bioactive glasses by experimental and computational investigation*. **Journal of Physical Chemistry B**, 112(40). <https://doi.org/10.1021/jp803031z>
60. Lusvardi, G., Malavasi, G., Menabue, L., & Menziani, M. C. (2008). *A combined experimental-computational strategy for the design, synthesis and characterization of bioactive zinc-silicate glasses*. **Key Engineering Materials** (Vol. 377). <https://doi.org/10.4028/0-87849-395-6.211>
61. Bertoldi C., Zaffe D. Consolo U; Lusvardi, G.; Lucchi A. Menabue (2008) L., *Vetri bioattivi con elementi stimolanti l'osteogenesi: primi risultati nel ratto*. **DOCTOR. OS** vol. 19 pp.41-43
62. Malavasi, G., Lusvardi, G., Pedone, A., Menziani, M.-C., Dappiaggi, M., Gualtieri, A., & Menabue, L. (2007). *Crystallization kinetics of bioactive glasses in the ZnO-Na₂O-CaO-SiO₂ system*. **Journal of Physical Chemistry A**, 111(34). <https://doi.org/10.1021/jp071528u>
63. Lusvardi, G., Malavasi, G., Menabue, L., Menziani, M. C., Pedone, A., & Segre, U. (2007). *Density of multicomponent silica-based potential bioglasses: Quantitative structure-property relationships (QSPR) analysis*. **Journal of the European Ceramic Society**, 27(2–3). <https://doi.org/10.1016/j.jeurceramsoc.2006.04.067>
64. Caselli, C., Lusvardi, G., Malavasi, G., Menabue, L., Miselli, P. (2007). *Multitechnique approach to V-ZrSiO₄ pigment characterization and synthesis optimization*. **Journal of the European Ceramic Society**, 27(2–3). <https://doi.org/10.1016/j.jeurceramsoc.2006.05.063>
65. Andreola, F., Castellini, E., Lusvardi, G., Menabue, L., Romagnoli, M. (2007). *Release of ions from kaolinite dispersed in deflocculant solutions*. **Applied Clay Science**, 36(4). <https://doi.org/10.1016/j.clay.2006.10.002>
66. Andreola, F., Romagnoli, M., Castellini, E., Lusvardi, G., & Menabue, L. (2006). *Role of the surface treatment in the deflocculation of kaolinite*. **Journal of the American Ceramic Society**, 89(3). <https://doi.org/10.1111/j.1551-2916.2005.00814.x>
67. Levrini, L., Lusvardi, G., Gentile, D. (2006). *Nickel ions release in patients with fixed orthodontic appliances*. **Minerva Stomatologica**, 55(3).
68. Linati, L., Lusvardi, G., Malavasi, G., Menabue, L., Menziani, M. C., Mustarelli, P., Segre, U. (2005). *Qualitative and quantitative structure-property relationships analysis of multicomponent potential bioglasses*. **Journal of Physical Chemistry B**, 109(11). <https://doi.org/10.1021/jp046631n>

69. Lusvardi, G., Malavasi, G., Menabue, L., Menziani, M. C., Pedone, A., & Segre, U. (2005). *A computational tool for the prediction of crystalline phases obtained from controlled crystallization of glasses*. **Journal of Physical Chemistry B**, 109(46). <https://doi.org/10.1021/jp0546857>
70. Castellini, E., Lusvardi, G., Malavasi, G., Menabue, L. (2005). *Thermodynamic aspects of the adsorption of hexametaphosphate on kaolinite*. **Journal of Colloid and Interface Science**, 292(2). <https://doi.org/10.1016/j.jcis.2005.05.065>
71. Lusvardi, G., Malavasi, G., Menabue, L., Menziani, M. C., Segre, U., Carnasciali, M. M., & Ubaldini, A. (2004). *A combined experimental and computational approach to $(\text{Na}_2\text{O})_{(1-x)}(\text{CaO})(\text{ZnO})_x2\text{SiO}_2$ glasses characterization*. **Journal of Non-Crystalline Solids**, 345–346. <https://doi.org/10.1016/j.jnoncrysol.2004.08.153>
72. Lusvardi, G., Malavasi, G., Menabue, L., Menziani, M. C., Segre, U. (2004) *Synthesis and in vitro studies of phosphosilicate glasses doped with cerium and zinc oxides*. pp.212-212. (vol2(3) **Journal of Applied Biomaterials&Biomechanics**
73. Leonelli, C., Lusvardi, G., Malavasi, G., Menabue, L., Tonelli, M. (2003). *Synthesis and characterization of cerium-doped glasses and in vitro evaluation of bioactivity*. **Journal of Non-Crystalline Solids**, 316(2–3). [https://doi.org/10.1016/S0022-3093\(02\)01628-9](https://doi.org/10.1016/S0022-3093(02)01628-9)
74. Lusvardi, G., Menabue, L., Malavasi, G., *In vitro characterisation of phosphosilicate and silicate glasses doped with zinc oxide*. pp.79-88. (2002) - vol. 13 (1) **MATERIALS ENGINEERING**
75. Leonelli, C., Lusvardi, G., Menabue, L., Tonelli, M. (2002). *Preliminary experiments of in situ atomic force microscopy observation of hydroxyapatite formation on bioactive glass surface*. **Journal of the American Ceramic Society**, 85(2).
76. Lusvardi, G., Malavasi, G., Menabue, L., Saladini, M. (2002). *Removal of cadmium ion by means of synthetic hydroxyapatite*. **Waste Management**, 22(8). [https://doi.org/10.1016/S0956-053X\(02\)00078-8](https://doi.org/10.1016/S0956-053X(02)00078-8)
77. Lusvardi, G., Malavasi, G., Menabue, L., & Menziani, M. C. (2002). *Synthesis, characterization, and molecular dynamics simulation of $\text{Na}_2\text{O}-\text{CaO}-\text{SiO}_2-\text{ZnO}$ glasses*. **Journal of Physical Chemistry B**, 106(38). <https://doi.org/10.1021/jp020321s>
78. Lusvardi, G., Menabue, L., & Saladini, M. (2002). *Reactivity of biological and synthetic hydroxyapatite towards $\text{Zn}(\text{II})$ ion, solid-liquid investigations*. **Journal of Materials Science: Materials in Medicine**, 13(1). <https://doi.org/10.1023/A:1013655123340>
79. Leonelli, C., Lusvardi, G., Montorsi, M., Menziani, M. C., Menabue, L., Mustarelli, P., & Linati, L. (2001). *Influence of Small Additions of Al_2O_3 on the Properties of the $\text{Na}_2\text{O} \cdot 3\text{SiO}_2$ Glass*. **Journal of Physical Chemistry B**, 105(5).
80. Leonelli, C.; Lusvardi, G.; Menabue, L. *Microstructure at the interface solution/bioactive glass cerium and silver addition in bioactive phosphosilicate glasses* **BRITISH CERAMIC PROCEEDINGS**. - (1999), pp. 543-544.
81. Bonamartini Corradi, A., Lusvardi, G., Menabue, L., Saladini, M., Sgarabotto, P. (1999). *Coordination properties of N-p-tolylsulfonyl-L-glutamic acid toward metal^{II}: Part 1. Crystallographic study on Zn^{II} and Cd^{II} complexes*. **Polyhedron**, 18(14). [https://doi.org/10.1016/S0277-5387\(99\)00093-5](https://doi.org/10.1016/S0277-5387(99)00093-5)

82. Lusvardi, G., Menabue, L., Saladini, M. (1997). *Factors influencing the removal of Pb(II) ion by means of hydroxyapatite*. **Annali Di Chimica**, 87(5–6).
83. Brückner, S., Lusvardi, G., Menabue, L., Saladini, M. (1995). *Crystal structure of lead hydroxyapatite from powder X-ray diffraction data*. **Inorganica Chimica Acta**, 236(1–2). [https://doi.org/10.1016/0020-1693\(95\)04636-N](https://doi.org/10.1016/0020-1693(95)04636-N)
84. Lusvardi, G., Menabue, L., Saladini, M., Spaggiari, M. (1995). *Effect of pH and anions on hydroxyapatite-Cu²⁺ solid-liquid interactions*. **Journal of Materials Chemistry**, 5(3). <https://doi.org/10.1039/jm9950500493>
85. Lusvardi, G., Menabue, L., Saladini, M. (1995). *Coordination properties of sulfonyl-N-aminoacids: Crystal and molecular structure of the [Zn(II)(N-(p-toluenesulfonyl)-L-glutamate)₂(H₂O)₂]* complex. **Journal of Chemical Crystallography**, 25(11). <https://doi.org/10.1007/BF01670323>
86. Lusvardi, G., Menabue, L., Saladini, M. (1995). Cadmium(II) N-(p-toluenesulphonyl)-L-glutamate. pp.2287-2289. **ACTA CRYSTALLOGRAPHICA. SECTION C, CRYSTAL STRUCTURE COMMUNICATIONS**
87. Lusvardi, G., Menabue, L., Saladini, M. (1994). *Substituent effect on the coordination ability of the amide group of N-protected amino acids*. **Inorganica Chimica Acta**, 218(1–2). [https://doi.org/10.1016/0020-1693\(93\)03793-A](https://doi.org/10.1016/0020-1693(93)03793-A)
88. Bruckner, S., Lusvardi, G., Menabue, L., Saladini, M. (1993). *Effect of Cu²⁺ ion on the structural stability of synthetic hydroxyapatite*. **Journal of Materials Chemistry**, 3(7). <https://doi.org/10.1039/jm9930300715>

PATENT

Foca G., Leoni D. Lusvardi G., Marchetti A., Roncaglia F., Tassi L *Indurenti non migratori per materiali proteici*. **U 102019000000532**

CHAPTERS IN BOOK WITH ISBN OR ISSN

1. Nicolini V, Malavasi G., Ferrari E., Benedetti F., Luches P. Lusvardi G., Castagnetti M., Valeri S. Saladini M., Menabue L. (2014). *Biovetri come potenziali drug delivery systems ed impianti con proprietà antiossidanti*, **Atti del XII Convegno Nazionale AIMAT**. ISBN: 9788894040203
2. Imrie, F. E., Aina, V., Lusvardi, G., Malavasi, G., Gibson, I. R., Cerrato, G., & Annaz, B. (2013). *Synthesis and characterisation of strontium and magnesium co-substituted biphasic calcium phosphates*. **Key Engineering Materials** (Vol. 529–530). <https://doi.org/10.4028/www.scientific.net/KEM.529-530.88>

3. Lusvardi G, Malavasi G., Menabue L., Menziani M.C., Pedone A. (2013). *Bioglasses: glasses for medical applications*. In: **12th international conference on the structure of non crystalline materials**. vol. 1, p. 72, Trento:Tipografia Unitn, ISBN: 978-88-8443-490-6
4. Malavasi, G., Lusvardi, G., Menabue, L., Ferrari, E., Saladini, M., Aina, V., Valetti, F. (2012). *Novel smart bio-nanomaterials: Bioactive glasses containing metal nano-particles conjugated with molecules of biological interest*. **Technical Proceedings of NSTI Nanotechnology Conference and Expo** ISBN: 9781466562769
5. V. Aina, L. Bergandi, F. Bonino, D. Ghigo, LUSVARDI, Gigliola, MALAVASI, Gianluca, MENABUE, Ledi, C. Morterra (2009). *Bioactive phospho-silicate glasses containing CaF₂: bioactivity test in simulated body fluids and behaviour towards osteoblast cells*. **Surface-Reactive Biomaterials as Scaffold and Coatings:Interactions with Cells and Tissues**. vol. 12, p. 243-249, , ISBN: 9788880801115
6. Lusvardi G, Malavasi G, Menabue L, Ana V, Morterra C, (2009). *Fluoride-containing bioactive glasses:surface reactivity in simulated body fluid*. **Ecers, 11th International Conference and Exhibition of the European Ceramic Society**. vol. 11, p. 109, Cracovia:Polish Ceramic Society, ISBN: 9788360958452
7. Cecchini M, Lusvardi G, Acchiappati D (2007). *Valutazione delle proprietà fisiche e chimiche dei camici anti-X reperibili sul mercato italiano” Atti Convegno Nazionale di radioprotezione: Sicurezza e Qualità in Radioprotezione*. In: **Atti convegno. vol. 1, p. 1-8, Milano:AIRP**, ISBN: 9788888648064,
8. LUSVARDI, Gigliola, MALAVASI, Gianluca, MENABUE, Ledi, GUALTIERI, Alessandro, C. Montanari (2007). *Mineralogical and microstructural study of the phases developed during the hydration process of industrial cement mixtures*. In: Proc. **10th ECerS Conf. vol. -**, p. 75-83, Baden:Göller Verlag, Baden-Baden, ISBN: 9783872640222
9. LUSVARDI, Gigliola, MALAVASI, Gianluca, MENABUE, Ledi, MENZIANI, Maria Cristina, PEDONE, Alfonso, ZAFFE, Davide (2006). *Physico-chemical characterization and in vivo evaluation of zinc-glasses biocompatibility*. In: **Abstract book. vol. 1, p. 164, Budapest:EUCHEMS**, ISBN: 9789639319615
10. LUSVARDI, Gigliola, MALAVASI, Gianluca, PEDONE, Alfonso, MENABUE, Ledi, MENZIANI, Maria Cristina, V. BOLIS, M. BORSETTI, F. BOCCAFOSCHI, M. CANNAS (2006). *Cell configuration for focal adhesions in cells seeded onto Zinc-doped silicate-bioglasses*. In: RAVAGLIOLI A;KRAJEWSKI A.. **Ceramic, Cells and Tissues; Materials for Scaffolding of Biologically engineered systems-Interface and Interactions on a Nanoscale**. p. 166-170, FAENZA:CNR Faenza, ISBN: 9788880800712
11. LUSVARDI, Gigliola, MALAVASI, Gianluca, MENABUE, Ledi, MENZIANI, Maria Cristina, SEGRE, Ulderico (2004). *CaO and ZnO in soda-silicate glasses: a molecular dynamics simulation study and experimental characterization*. In: P. VINCENZINI;A. LAMI. **Advances in Sciences and Technology**. vol. 42, p. 127-134, FAENZA:Techna Group srl, ISBN: 9788886538459

12. Braccini, S., Leonelli, C., Lusvardi, G., Malavasi, G., Menabue, L. (2004). *In Vitro Evaluation of Zirconia Nanopowders*. **Key Engineering Materials** (Vol. 254–256). ISSN: 1662-9795
13. LUSVARDI, Gigliola, MALAVASI, Gianluca, MENABUE, Ledi, SALADINI, Monica (2003). *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, ISBN: 9788886538435
14. BONDIOLI, Federica, BRACCINI, Silvia, LEONELLI, Cristina, PELLACANI, Gian Carlo, LUSVARDI, Gigliola, MALAVASI, Gianluca (2003). *In vitro bioactivity testing of ZrO₂ nanopowders prepared by MW-assisted hydrothermal synthesis*. In: V.E. BORISENKO; S.V. GAPONENKO; V.S. GURIN. **Physics, Chemistry and Application of Nanostructures: Reviews and short notes to Nanomeeting** p. 338-341., ISBN: 9789812383815
15. LUSVARDI, Gigliola, MALAVASI, Gianluca, MENABUE, Ledi, MENZIANI, Maria Cristina (2003). *Zinc addition to sodium-calcium-silicate bioglasses. Theoretical vs experimental results*. In: VINCENZINI P.; LAMI A.. **Advances in Science and Technology**. vol. 36, p. 91-98, FAENZA: Faenza Ed., ISBN: 9788886538381
16. LUSVARDI, Gigliola, MENABUE, Ledi, SALADINI, Monica (1999). *EFFECT OF TEMPERATURE ON THE CHEMICAL AND PHYSICAL PROPERTIES OF SYNTHETIC FLUOROAPATITE*. In: **Biomateriali 1999**. p. 97-101, ROMA: ENEA, ISBN: 9788882860769
17. LUSVARDI, Gigliola, MENABUE, Ledi, SALADINI, Monica (1995). *Reaction behaviour of hydroxyapatite toward the Zn²⁺ ion.*. In: VINCENZINI P.. **Advances in Sciences and Technology**. vol. 12, p. 35-42, FAENZA: Techna Group, ISBN: 9788886538114

CONFERENCE PROCEEDINGS

1. Malavasi, G, Lusvardi, G, Menabue, L, Ferrari, E, Saladini, M, Aina V, C. Monterra C, Laurenti E, Bergandi L, Ghigo D (2011). *Novel smart bio-materials: bioactive glasses containing metal nano-particles conjugated with molecules of biological interests*. In: **Atti del XXXIX Congresso Nazionale di Chimica Inorganica - XXIV Congresso Nazionale della Società Chimica Italiana**. p. x, Lecce: Società Chimica Italiana, Lecce
2. Fantini F, Ferrari E, Lusvardi G, Malavasi G, Menabue L., (2010). *Synthesis and characterization of Ga-containing silicate based sol-gel and mesoporous sol-gel bioactive glasses loaded with curcumin*. In: **Atti del XXXVIII Congresso Nazionale di Chimica Inorganica**. p. x, TRIESTE: Società Chimica Italiana
3. Bertoldi, Carlo; Zaffe, Davide; Lusvardi, Gigliola; Pellacani, C.; Consolo, Ugo, *Nuovi vetri contenenti zinco*, **Congresso Internazionale del "Collegio dei Docenti di Odontoiatria"** (2008)

4. Bertoldi, Carlo; Zaffe, Davide; Lusvardi, Gigliola; Pellacani, C.; Consolo, Ugo, *Biocompatibilità di vetri contenenti zinco*, **Congresso Internazionale del "Collegio dei Docenti di Odontoiatria"**(2007)
5. Lusvardi G, Malavasi G, Menabue L, Menziani M.C., Segre U., Aina V., Morterra C, Cannas MF, (2005). Zinc-releasing silicate-bioglasses modulated Bone Cells Activity. In: Trans. for SFB Meeting.
6. LUSVARDI, G, ZAFFE, D, BERTOLDI, C, MALAVASI, G, MENABUE, L MENZIANI, MC, PEDONE, A (2004). Vetri bioattivi contenenti zinco: comportamento in vitro ed in vivo. In: Congresso nazionale Biomateriali. vol. Volume unico, p. C022, Napoli:Società chimica Italiana, Gruppo interdivisionale biomateriali
7. LUSVARDI G, L.MENABUE, M.SALADINI (1998). Removal of the Pb(II) ion by means of hydroxyapatite. In: 1ST NATIONAL CONGRESS VALORIZATION AND RECYCLING OF INDUSTRIAL WA. p. 227-234
8. LUSVARDI G, L.MENABUE, M.SALADINI (1995). IONS EFFECT ON THE REACTIVITY OF BIOLOGICAL AND SYNTHETIC HYDROXYAPATITE. In: Synthesis and Methodologies in Inorganic Chemistry, New Compounds and Materi