Curriculum formativo, didattico, scientifico e professionale del candidato

Dichiarazione sostitutiva di certificazioni

(Art. 46, D.P.R. 28 dicembre 2000 n. 445)

Dichiarazione sostitutiva dell'atto di notorietà

(da sottoscrivere davanti all'impiegato addetto o da presentare o spedire con la fotocopia di un documento di identità)
(Art. 47, D.P.R. 28 dicembre 2000 n. 445)

Estremi del bando di selezione	"Preparazione e caratterizzazione di paste e inchiostri conduttivi biodegradabili" - Responsabile scientifico: prof. Luca Pilia - CUP: B29J23001120005.
Informazioni aggiornate al	14/04/2025
Nome e Cognome	Seyed Hossein Mussavi Rizi

Si raccomanda di indicare con precisione tutti gli elementi valutabili ai sensi del bando di selezione (aggiungere o togliere righe secondo necessità).

Esperienza professionale

Periodo	Ente	Principali attività e responsabilità
2025-2026	**Post Doctoral Researcher, Università degli Studi di Cagliari**	**Preparation and characterization of biodegradable conductive pastes and inks.**
2019–2023	**Research Assistant, Politecnico di Torino, Italy**	**Bioglass extrusion, fabrication of microstructured optical fibers, and phosphate-based bioresorbable glasses. Feasibility research on and designs for bioglass 3D printing.**
2016–2018	**Research Assistant, Shahrood University of Technology, Iran**	**Fabrication of ceramic matrix composites (ZTA, CNT, LSM) and their rheological and mechanical properties. Lab maintenance and reports.**
2012–2013	**Intern, Qaem Metal Casting, Iran**	**Design processes to minimize scrap and subsequent machining.**

Istruzione, formazione (es. titoli di studio, certificazioni professionali/linguistiche/informatiche)

Data	Titolo / Principali tematiche	Ente
09/2023	**PhD, Materials Science and Technology** **Dissertation "Bioresorbable phosphate glass optical fibers for biomedical applications,"** **supervised by Professor Davide L. Janner and Professor Nadia G. Boetti**	**Politecnico di Torino, Torino, Italy**
09/2016	**M.Sc., Materials Science and Engineering, Ceramics** **Thesis "Mechanical properties of zirconia-alumina composite thin films reinforced**	**Shahrood University of Technology, Shahrood, Iran**

	with carbon nanotubes prepared by tape casting method," supervised by Professor Mojtaba Ghatee.	
02/2013	**B.Sc., Materials Science and Engineering, Industrial Metallurgy** **Thesis "Effects of temperature and electric current in electrodeposition on particle size and morphology of nanosilver powders," supervised by Professor Reza Derakhshandeh-Haghighi**	**Azad University (Fars Science and Research Branch), Shiraz, Iran**
TOEFL iBT	**107**	**Dec 2022**

Pubblicazioni / Convegni

1. 2026: Working Article: Tailoring the Microstructural and Electrical Properties of Sustainably-Sourced Graphene-Starch Conductive Inks for Flexible Paper-Based Electronics.
2. 2025Oral presentation with title: Advances in Bioresorbable Phosphate Glass Optical Fiber Fabrication. MACCS2 Workshop, June 2025, Cagliari, Italy.
3. "Towards a novel bi-functional bioresorbable micro-structured optical fiber for theranostic applications," Proc. SPIE 12627, Translational Biophotonics: Diagnostics and Therapeutics III, 126271N (11 August 2023); https://doi.org/10.1117/12.2670867 (2023).
4. Bioresorbable phosphate glass microstructured optical fibers with hole and core for biomedicine. (Paper 12573-39), SPIE Optics + Optoelectronics 2023. (2023).
5. Phosphate glass-based microstructured optical fibers with hole and core for biomedical applications, *Optical Materials*, 131. (2023).
6. Characterization of anode supported micro-tubular solid oxide fuel cells prepared by successive non-aqueous electrophoretic deposition, *Journal of Electroceramics*, 48, 1–7. (2021).
7. A study of mechanical properties of alumina–zirconia composite films prepared by a combination of tape casting and solution impregnation method, *Journal of Australian Ceramics Society*, 56, 167–174. (2020).
8. Rheological and mechanical properties of tape-casted zirconia-toughened alumina composite thick films reinforced with multiwalled carbon nanotubes. *Journal of Composite Materials*, 54(17): 2353–2363. (2020).

Altre attività scientifiche

3D Printing of bioresorbable phosphate glasspolymer composites with FDM technique 2023-2024
Teaching Assistant, Shahrood University of Technology, Iran

Led sections for the General Chemistry course; reviewing the course material; going over problem sets; correcting homework, and grading exams. 2013-2014
MDPI **– Optical biosensors** **– Synthesis and sintering of high-entropy ceramics** **– Photodynamic therapy** **Properties and functions of medical and dental cement, Faculty of Chemical Engineering and Materials Colloquium Series, Shahrood University of Technology. 2014** **ANOVA for design and analysis of experiments in ceramics, Faculty of Chemical Engineering and Materials Colloquium Series, Shahrood University of Technology. 2014** **Workshop on X-ray diffraction for advanced identification and analysis of materials, Faculty of Mining, Petroleum and Geophysics Engineering, Shahrood University of Technology, Shahrood, Iran. 2013**

Ulteriori informazioni pertinenti

Skills Technical **– Characterization Techniques: Thermogravimetric Analysis (TGA), Rheometry (Viscosity & Shear-thinning profiles), Optical Microscopy, Scanning Electron Microscopy (SEM).** **– Electrical Testing: 2-Point and 4-Point Probe DC measurements, Sheet Resistance (Rs) characterization, Bulk Conductivity calculation and analysis.** **– Ink Formulation & Processing: Nanomaterial dispersion (HRCM Graphene), Bio-binder integration (Corn Starch, Rice Starch, Wheat Starch, Ethyl Cellulose), Aqueous/Organic solvent systems, Tape Casting, Flash-Sintering, and Thermal Annealing.** **– Keen knowledge and hands-on experience in glass fabrication, extrusion, and fiber drawing** **– Familiarity with refractive index measurements, attenuation and loss measurements, optical glass fiber cleaving, and splicing** **– Proficient in laboratory operating procedures and equipment: operating furnaces, particle size, and zeta potential analyzers, nanoindentation, microhardness.** **– Extensive experience in colloidal, wet, and dry ceramic processing and fabrication methods such as tape casting and screen printing** **– Familiarity with Scanning electron microscopy (SEM),** **X-ray diffraction (XRD), Electrochemical impedance spectroscopy (EIS)**
Computation: OriginLab, ImageJ, X'pert, Fusion360, Matlab. Coding: Basic Python. Productivity: MS Office, Latex.

Luogo e data 13/04/2026, Cagliari