

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	Bando 384/2025 del 30/09/2025
Informazioni aggiornate al	3/11/2025
Nome e Cognome	Mariano Casu

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
15/03/2023 – 12/06/2024 17/01/2025- 12/09/2025	University of Cagliari, Faculty of Engineering and Architecture	Academic and Organization Tutor for the activities of the Faculty of Engineering and Architecture
15/03/2023 – 19/04/2023	University of Cagliari, DIMCM	Academic Tutor in the course “Environmental and Conscious Energetic and Chemical Processes”
16/03/2022 – 27/04/2022	Tecnocasic S.p.A, Dorsale Consortile km. 10.500 Zona Industriale Macchiareddu, Capoterra (CA), Italy	Internship in a waste management plant. Assist to the plant managing. Work and problem solving applied to automated process control. Training on the emission monitoring system (SME) and on the Italian integrated environmental authorization (AIA)
13/07/2020 – 02/09/2020	University of Cagliari, DIMCM	Academic internship on the evaluation and feasibility of the use of the software AQUATOX to model and assess the pollution level of a Sardinian river ecosystem.

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

Data	Titolo / Principali tematiche	Ente
5/6/2023- 7/6/2023	“Non-conventional sintering: Science and Technology” Summer School	University of Trento (Italy)
From 1/11/2022	International PhD in Innovation Sciences and Technologies	University of Cagliari (Italy)
13/10/2022- 28/10/2022	DAET summer school on Process Decarbonization	Italian Association of Chemical Engineering (AIDIC)
29/07/2022	Master's degree in Chemical Engineering and Biotechnological Processes (110L/110)	University of Cagliari (Italy)
7/06/2022	Master's degree in Chemical Engineering and Bioengineering	University of Chemistry and Technology, Prague (Czech Republic)

25/9/2020	Laurea Triennale in Ingegneria Chimica (110L/110)	University of Cagliari (Italy)
-----------	---	--------------------------------

Pubblicazioni / Convegni

Co-Author of the paper: Synthesis, Sintering, Mechanical Properties and Oxidation Behavior of (Zr _{0.5} Me _{0.5})B ₂ (Me = Ta, Hf) Solid Solutions, Ceram. Int. (2024)
Co-Author of the paper: Comprehensive Mechanistic Modelling of Non-isothermal CO ₂ Adsorption in Fixed Packed Bed, CET(2024)
Co-Author of the paper: Third-Generation CALPHAD Modeling of Elemental Nb and Zr and Partial Re-Assessment of Their Binary Phase Diagram, Materials (2024)
Author of the paper: Processing and characterization of Ultra High Temperature High-Entropy (Ti _{0.2} Zr _{0.2} Hf _{0.2} Mo _{0.2} W _{0.2})B ₂ -based Ceramics: Effect of W granulometry, graphite, and SiC addition, Journal of Alloys and compounds (2024)
Co-Author of the paper: From individual to equimolar binary transition metal diborides: The case of (Nb _{0.5} Mo _{0.5})B ₂ , M= Ti, Hf, Journal of the European Ceramic society (2025)
Author of the paper: Enhanced Properties by Spark Plasma Sintering of Additive-free Martian Soil Simulants for ISRU Applications, Ceram. Int. (2025)
Author of the paper: Process Integration Approach for the Efficient Synthesis of Metal Boride Ceramics, CET (2025)
Co-Author of the paper: Constitutive Modeling of Pressure-Assisted Powder Consolidation by Spark Plasma Sintering: The Case of Transition Metal Diborides, Journal of the European Ceramic society (2025)
Participation at the: XVIII ECERS Conference and Exhibition held in Lyon (France), 2-6 July 2023
Participation at the: Ultra-High Temperature Ceramics: Materials for Extreme Environment Applications VI held in Giardini Naxos (Italy), 14-19 April 2024
Participation at the: XIV Convegno INSTM sulla Scienza e Tecnologia dei Materiali held in Cagliari (Italy), 9-12 June 2024
Participation at the 17 th ICHEAP conference held in Florence (Italy) 29 June-2 July 2025

Altre attività scientifiche

Co-supervisor of a Bachelor's thesis (student: Matteo Figus) in the Chemical Engineering course, academic year 2022/23
Co-supervisor of a Master's thesis (student: Federico Zedda) in the Chemical Engineering and Biotechnological Processes course, academic year 2022/23
Co-supervisor of a Bachelor's thesis (student: Carlotta Minutoli) in the Chemical Engineering course, academic year 2022/23
Co-supervisor of a Master's thesis (student: Daniel Bambas) in the Chemical Engineering and Biotechnological Processes course, academic year 2023/24

Ulteriori informazioni pertinenti

--

Luogo e data
Cagliari, 3/11/2025