

University Academic Curriculum Vitae

Personal information Name: Alessandro Alleva

Education since leaving school

- Bachelor's Degree in Materials Engineering and Nanotechnology (2018, Politecnico di Milano)
- Master's Degree in Materials Engineering and Nanotechnology (2021, Politecnico di Milano)

Present appointment

- Research Fellow
- 15/12/2024
- Fixed-term research fellow
- Libera Università di Bolzano
- Researcher in the biodegradable thin-film electronics field

Professional experience /

Participation in exhibitions (where applicable) /

Experience in academic teaching /

Other academic responsibilities /

Memberships Research and scholarships /

Publications Sharma, R., Alleva, A., Hajjiah, A., Sivaramakrishnan Radhakrishnan, H., & Poortmans, J. (2022). Comparison of C-, N-, and O-Incorporated Non-blistering PECVD Si Films for Application in SiO_x-Based Passivating Contacts for Si Solar Cells. *ACS Applied Energy Materials*, 5(8), 9994-10001.

Salman, Y., Waseem, S., Alleva, A., Banerjee, P., Bonanni, V., Emanuele, E., ... & Bozzini, B. (2023). Synthesis, characterization, functional testing and ageing analysis of bifunctional Zn-air battery GDEs, based on α -MnO₂ nanowires and Ni/NiO nanoparticle electrocatalysts. *Electrochimica Acta*, 469, 143246.

Bozzini, B., Tavola, F., Travella, A., Alleva, A., Mele, C., Emanuele, E., ... & De Gaudenzi, G. P. (2023). In-Depth Understanding of Hardmetal Corrosion Performance Reveals a Path to the Electrochemical Demolition of Scrap. *Metals*, 13(8), 1376.

Alleva, A., Ciancio, R., Emanuele, E., Gianoncelli, A., Kourousias, G., & Bozzini, B. (2024, August). Electrochemical, Structural, and Hyperspectral Imaging Investigation of Bifunctional Zn-Air Battery Gas-Diffusion Electrodes. In *ECS Meeting Abstracts* (No. 46, p.

2573). IOP Publishing.

Bozzini B., Alleva A., Bonanni V., Ciancio R., Kourousias G., Guzzi F, Rajak P., Gianoncelli A. Degradation of α -MnO₂ in Zn-air battery gas-diffusion electrodes: an investigation based on chemical-state mapping. *Electrochimica Acta* (under revision).

Emanuele, E., Agrios, A., Alleva, A., Bonanni, V., Ciancio, R., Gianoncelli, A., Guzzi, F., Kourousias, G., Li Bassi, A., Macrelli, A., Ronchese, P., Sifat, H., Žižić, M., Bozzini, B. ZnO nanorods on carbon cloth as novel binder-free flexible anode for Zn secondary batteries. *Advanced Energy Materials* (submitted)

**Publications about
the applicant**

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Further data

IWES 2023 Conference – Oral Presentation (awarded the best oral presentation prize)

IWES 2024 Conference – Poster Presentation

245th ECS Meeting in San Francisco – Oral Presentation
Spin-offs, patents and entrepreneurship

Entrepreneurship

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Statement of interest

My expertise in microfabrication and electrochemistry, combined with a strong theoretical foundation in materials science and engineering, aligns closely with the goals of the assigned project. Additionally, the skills and experience I have developed during my three years as a PhD candidate have equipped me with the essential soft skills needed to excel as a research fellow and contribute effectively to the team.

**Language
competence**

English: C1 (TOEIC)

Date 26/11/2024