

Curriculum Vitae

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Current Position

- **Postdoc in Biology and Biological Engineering** Göteborg, Sweden
Chalmers University of Technology (CTH) 01/2022 – present
 - Project: Nanomaterials for antibacterial applications *funded by NordForsk*

Education

- **Ph.D. in Materials Science** Luleå, Sweden
Luleå University of Technology (LTU) 11/2017 – 12/2021
 - Project: Ammonia carriers for the SCR system *funded by Formas*
- **M.Sc. in Nanoscience and Nanotechnology** Belgium & Sweden
Erasmus Mundus Nanoscience and Nanotechnology (EM-Nano) 09/2014 – 06/2016
 - KU Leuven, Belgium (1st year) & Chalmers University of Technology, Sweden (2nd year)
 - Level: Magna cum laude (great distinction honor), specialization in Nanoelectronics
- **Undergraduate Exchange Program** Hsinchu, Taiwan, ROC
National Chiao Tung University 02/2012 – 06/2012
 - 5 undergraduates selected (only one selected from Department of Materials Science)
- **B.Sc. in Materials Science and Engineering** Chengdu, China
Southwest Jiaotong University 09/2010 – 06/2014
 - Level: Distinctive bachelor thesis, national scholarship, top 10% GPA

Industrial Position

- **IC Package Engineer** Shenzhen, China
Huawei Technologies Co., Ltd. 09/2016 – 09/2017
 - Evaluation and design of the semiconductor circuit package

Pedagogical Experiences

- **Pedagogical Training (10.5 ECTS)** LTU & CTH, Sweden
University pedagogy courses 02/2021 – present
- **Guest Lecturer of UCM010** CTH, Sweden
Guest Lecture "Nanomaterials for antibacterial applications" 05/2022
- **Master Thesis Co-Supervision** LTU, Sweden
2019: Nicolas Grimaldos Osorio, Rafael Acosta Laisequilla 01/2019 – 08/2019
- **Master Project Supervision (T7009T)** LTU, Sweden
2018: Pauline Léonard, Nicolas Grimaldos Osorio; 2020: Kyllian Demenus 08/2018 – 12/2020
- **Courses Responsibility (T0004T, T0021T, T7003T)** LTU, Sweden
Lessons, seminars, laboratory, reports, and project supervision, etc. 11/2017 – 11/2021
- **Pedagogical Development Contribution** LTU, Sweden
University Pedagogical Conference 2021 06/2021
 - Gamification in virtual lab design: engagement booster or creativity killer? *Workshop with over 25 lecturers*

Organizational Experiences

- **Member of Core Value Team (CVT) at Sysbio** CTH, Sweden
Management, survey, working culture, group activities, etc. 02/2022 – present
- **Organizing Committee of Conferences/Symposiums/Schools** LTU & CTH, Sweden
Registration, logistics, flyer design, IT management, etc. 12/2021 – present
 - PEST-BIN summer school 2022, Chalmers, Sweden
 - Yeast Lipid Conference 2022, Chalmers, Sweden
 - 1st CCU-Net Symposium 2021, LTU, Sweden
- **Instruments Responsibility** LTU & CTH, Sweden
Equipment installation, maintenance, training, booking management, etc. 11/2017 – present
 - SDT650 (DSC & TGA, TA instrument) ; IsoSORP (Sorption analyzer, TA instrument); CoolSafe 4L (Freeze dryer, ScanVac); Gemini VII (Surface analyzer, Micromeritics); Gas responsibility (Training from AGA AB)
- **Paper Reviewer** Online
Scientific paper reviewing duty (ChemComm, Sci. Rep., etc.) 03/2022 – present

Miscellaneous

- **Awards and Fundings**
 - Best poster award of Science and Technology Day 2022 - 15k SEK
 - Knut & Alice Wallenberg Foundation travel award - 30k SEK
 - WISE postdoc funding submitted - co-applicant - selected by CTH for submission of full proposal
 - EI Nano call submitted (750k SEK) - co-applicant
- **Language**
 - Chinese: Native
 - English: Professional working proficiency
 - Swedish: SFI D level certificate, Svenska som andraspråk nivå 1 certificate
- **ICT Skills**
 - Software: Adobe Illustrator, Photoshop, Dimension; Final Cut Pro X; Blender; AutoCAD, Klayout, etc.
 - Programming: VBA, C++, Latex, basic Linux, basic python

Selected Publications

1. Cao, Z., Akhtar, F. (2021), Porous SrCl₂ Scaffolded by Graphene Networks as Ammonia Carriers. *Advanced Functional Materials*, 2021, 2008505.
2. Cao, Z., Osorio, N. G., Cai, X., Feng, P., Akhtar, F. (2020). Carbon-reinforced MgCl₂ composites with high structural stability as robust ammonia carriers for selective catalytic reduction system. *Journal of Environmental Chemical Engineering*, 8(1), 103584.
3. Pandit, S.[†], Cao, Z.[†], Mokkalapati, V. R., Celauro, E., Yurgens, A., Lovmar, M., ... & Mijakovic, I. (2018). Vertically aligned graphene coating is bactericidal and prevents the formation of bacterial biofilms. *Advanced Materials Interfaces*, 5(7), 1701331.
4. Cao, Z., Landström, K. N., Akhtar, F. (2020). Rapid Ammonia Carriers for SCR Systems Using MOFs [M₂(adc)₂(dabco)](M = Co, Ni, Cu, Zn). *Catalysts*, 10(12), 1444.
5. Cao, Z., Laisequilla R. A., Akhtar, F. (2021). 3D-Printed Zeolite NaX-Magnesium Chloride Units as Ammonia Carriers. *Energy Proceedings*, 18(14), 2004-2965.