

# Europass Curriculum Vitae



## Personal information

First name(s) / Surname(s) **OYUT BATCHULUUN**  
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Nationality MONGOLIA  
Date of birth 03/05/1999  
Gender FEMALE

## Work experience

|                                      |  |
|--------------------------------------|--|
| Dates                                | Nov 2024 – Present   |
| Occupation or position held          | PhD candidate in Nanotechnology  |
| Main activities and responsibilities | Conducted original research on the integration of InAs quantum wells with superconductors for quantum computing, designed and executed experiments, analyzed data, collaborated with interdisciplinary teams, and contributed to publications.                   |
| Name and address of employer         | University of Trieste, Trieste, Italy<br>CNR - Istituto Officina dei Materiali (IOM)   |
| Dates                                | Oct 2022 – Aug 2023  |
| Occupation or position held          | Laboratory assistant   |
| Main activities and responsibilities | Prepare lab equipment for upcoming research experiments, report data and compile information into graphs and documents, clean and maintain lab equipment.  |
| Name and address of employer         | Department of Chemistry and Biological Engineering, National University of Mongolia, Ulaanbaatar, Mongolia   |
| Type of business or sector           | Public   |
| Dates                                | Oct 2021 – Jan 2022  |
| Occupation or position held          | Test analyst   |
| Main activities and responsibilities | All responsibilities of test planning, to check if the team has all the necessary resources to execute the testing activities and if testing is going hand in hand with the software development in all phases. Prepare the status report of testing activities. |
| Name and address of employer         | Interactive LLC, Ulaanbaatar, Mongolia   |
| Type of business or sector           | Private  |

## Education and training

|  |  |
|--|--|
| Dates  | Sep 2021 – Jan 2023  |
| Title of qualification awarded                                 | Master of Science  |
| Principal subjects/occupational skills covered                 | Physics  |
| Name and type of organisation providing education and training | National University of Mongolia, Ulaanbaatar, Mongolia                             |
| Thesis Topic   | Electronic properties of Al/InGaAs interface using density functional theory       |
| Grade Point Average (GPA)                                      | 3.8/4.0  |
| Dates  | Sep 2017 – Jun 2021  |
| Title of qualification awarded                                 | Bachelor of Engineering  |
| Principal subjects/occupational skills covered                 | Nano Science and Engineering   |
| Name and type of organisation providing education and training | National University of Mongolia, Ulaanbaatar, Mongolia                             |
| Thesis Topic   | Semiconductor InAs/InGaAs quantum well simulated by the Poisson-Schrodinger method |
| Grade Point Average (GPA)                                      | 3.5/4.0  |

## Personal skills and competences

Mother tongue(s) **Mongolian**

Other language(s) **English**

Self-assessment

European level (\*)

**Language**

| Understanding |         | Speaking           |                   | Writing |  |
|---------------|---------|--------------------|-------------------|---------|--|
| Listening     | Reading | Spoken interaction | Spoken production |         |  |
| B2            | B2      | B2                 | B2                | B2      |  |

(\*) [Common European Framework of Reference for Languages](#)

Social skills and competences **Playing chess**

Technical skills and competences **Synthesis and functionalization of nanoparticles such as coprecipitation, sol-gel method, Ball milling**

**Spectroscopic analysis such as UV-vis, Nanophox (Photon Cross-Correlation Spectroscopy PCCS), Surface area analyzer (Brunauer-Emmett-Teller BET), Zeta potential measurement**

Computer skills and competences **Software and computer programs such as Quantum Espresso, 1D Poisson, NextNano, XCrysden, Vesta, Linux, Origin, Latex, PowerPoint**

## Additional information

**Publications:** Batchuluun, O., Tsogbadrakh, N., & Ganbold, T. "Prediction of Optimal Thickness of InAs/InGaAs Quantum Well." Defect and Diffusion Forum, vol. 423, Trans Tech Publications, Ltd., 17 Apr. 2023, pp. 33–40. Crossref, doi:10.4028/p-uxr24d.

**Poster Presentation:** "Optimal thicknesses on InAs/InGaAs quantum well by simulating charge density of 2DEG using the Poisson-Schrodinger method" at the 10th International Conference on Materials Science, November 19-20, 2021.

Research Associate  
Nov 2022 – Mar 2023

Nanomagnetic Materials Design and Characterization of High Energy Product Permanent Magnet

Research Associate  
Jun 2020 – Aug 2020

NUM Start-Up 2.0

Project title: 'Antimicrobial Copper Nanocomposite Spray'

The undersigned is aware that, pursuant to art. 26 of Law 15/68, and Articles. 46 and 47 of Presidential Decree 445/2000, false statements, falsified acts and use of false acts are punishable under the Penal Code and special laws. Moreover, the undersigned authorizes the processing of personal data, in accordance with the provisions of Law 675/96 of 31 December 1996.

City \_Trieste,Italy\_, on 27/01 / 2025

NAME (SIGNATURE)

