

# EasyGrid - A device for automated preparation and quality control of CryoEM samples

EMBLEM Ref. 2018-032, 2022-021

## Challenge

- Single particle analysis (SPA) and cryo-ET have recently been at the forefront of structural biology with important implications in the fields of pharmacology and biomedical research
- While pushing the limits of the microscopes towards higher resolutions and faster data-collection, the sample preparation stage still remains poorly automated and inaccessible to untrained users

## Commercial Opportunity

- EMBL offers a Technology Evaluation Programme, as well as licensing and collaboration opportunities

## Technology

- Scientists at the EMBL Grenoble developed a prototype device that fully automates the procedure using **in-line plasma treatment, picolitre drop dispensers, jet vitrification and automated cryo-storage**
- Furthermore, a laser-interferometry based **quantitative control** of the grids, providing a nanometre scale ice thickness map of the prepared samples is available

## Contact

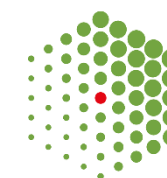
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## Key Inventors

Dr. Gergely Papp  
Head of Instrumentation Team  
EMBL Grenoble

## Intellectual Property

[WO2020058140A1](#)



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## Benefits:

- jet vitrification has a much greater cooling rate than traditional plunging
- the quality control unit enables identification of areas with correct thickness for examining single particles
- the automated storage unit enables automated sample tracking

## Application:

Preparation and quality control of Cryo-EM grids.

## References

<https://www.embl.org/groups/grenoble-instrumentation/>

### Internal Reference


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