

# The EXCITE<sup>2</sup> Network: a European infrastructure providing transnational access to leading-edge imaging facilities

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The EXCITE<sup>2</sup> Network is a leading European electron and X-ray imaging infrastructure for research into Earth materials. This network is revolutionizing Earth and environmental material science research by consolidating 19 research facilities in 12 European and associated partner countries into a unified infrastructure that will provide transnational access to advanced imaging technologies. This open access to our state-of-the-art microscopy facilities enables scientists to decipher complex processes within Earth materials across scales ranging from nanometres to hundreds of centimetres. Understanding these processes is critical to creating a sustainable, carbon-neutral society, as they govern various phenomena, including environmental toxicity and its impact on human health, critical metal extraction for renewable energies, geothermal energy extraction, subsurface energy storage, and the utilization of Earth materials for long-term storage of climate-altering gases.

EXCITE<sup>2</sup> is driving interdisciplinary collaboration and cross-fertilisation across academic institutions, scientific disciplines, and industry, propelling Europe towards a sustainable future. In addition to access to leading-edge imaging facilities, the network offers early career researchers a chance to team up with leading Earth-materials scientists, develop new collaborations, engage in cross-disciplinary initiatives, and execute progressive electron and X-ray imaging projects that contribute to the advancement of Earth-materials research. We connect with you, provide access to workshops and webinars, assist in preparing your proposals for facility access, and actively support your research goals. Moreover, the initiative offers dedicated training programmes to a new generation of researchers within the European open science landscape. EXCITE<sup>2</sup> is introducing innovative service developments, such as artificial intelligence and leading-edge imaging experiments, to increase the user's problem-solving capacity. As such, EXCITE<sup>2</sup> is paving the way towards a sustainable future, driving scientific excellence, and creating positive societal impact.

Access to EXCITE<sup>2</sup> can be requested by applying to our transnational access calls. Interested? Have a look on our website (<https://excite-network.eu>) – and apply for the next call!

## **Keywords:**

EXCITE, Transnational access, Electron microscopy