H2020

Research Infrastructures offering free access with EU support

# Introduction

European researchers need effective and convenient access to the best research infrastructures in order to conduct research for the advancement of knowledge and technology. Horizon 2020 Research Infrastructures actions aim to bring together, integrate on European scale, and open up key national and regional research infrastructures to all European researchers, from both academia and industry, ensuring their optimal use and joint development.

This document provides a list of Research Infrastructures projects that offer free access: either transnational access, based on call for proposals, or virtual access (online services). These opportunities are publicised widely by each individual project, in particular on their web site.

To facilitate the search, projects are listed by main scientific domain.

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| **ENVIRONMENTAL and EARTH SCIENCES** | |
| **Type/Area** | **Infrastructure** |
| Ground-based stations | Aerosols, Clouds, and Trace gases Research InfraStructure  (**ACTRIS-2**) |
| Simulation chambers | Integration of European Simulation Chambers for Investigating Atmospheric Processes – Towards 2020 and beyond  (**EUROCHAMP-2020**) |
| Terrestrial sites | European Long-Term Ecosystem and socio-ecological Research Infrastructure (**eLTER**) |
| Terrestrial stations | International Network for Terrestrial Research and Monitoring in the Arctic (**INTERACT**) |
| Volcano observatories | European Network of Observatories and Research Infrastructures for Volcanology (**EUROVOLC**) |
| Mesocosms | Network of Leading European AQUAtic MesoCOSM Facilities Connecting Mountains to Oceans from the Arctic to the Mediterranean (**AQUACOSM**) |
| Hydraulic experimental facilities | HYDRALAB+ Adapting to climate change (**HYDRALAB-PLUS**) |
| Coastal observatories | Joint European Research Infrastructure network for Coastal Observatory – Novel European eXpertise for coastal observaTories (**JERICO-NEXT**) |
| Deep sea observatories | Implementation of the Strategy to Ensure the EMSO ERIC’s Long-term Sustainability (**EMSO-Link**) |
| Marine data centres | SeaDataCloud - Further developing the pan-European infrastructure for marine and ocean data management (**SeaDataCloud**) |
| Multi-platforms | Environmental Research Infrastructures Providing Shared Solutions for Science and Society (**ENVRI PLUS**) |

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| **BIOLOGICAL AND MEDICAL SCIENCES** | |
| **Type/Area** | **Infrastructure** |
| Biobanks | EurOPDX Distributed Infrastructure for Research on patient-derived cancer Xenografts (**EDIReX**) |
| Virus Archive | European Virus Archive goes global (**EVAg**) |
| Insect repositories | Research Infrastructures for the control of vector-borne diseases (**INFRAVEC2**) |
| Marine biology resource | European Marine Biological Research Infrastructure Cluster to promote the Blue Bioeconomy (**EMBRIC**) |
| Marine biology resource | Association of European Marine Biological Laboratories Expanded (**ASSEMBLE Plus**) |
| Structural biology facilities | Infrastructure for NMR, EM and X-ray crystallography for translational research (**iNEXT**) |
| BSL4 Laboratories | European Research Infrastructure on Highly Pathogenic Agents 2 (**ERINHA2**) |
| Nanomedicine Characterization Laboratory | European Nanomedicine Characterization Laboratory (**EU-NCL**) |
| Aquaculture research facility | AQUAculture infrastructures for EXCELlence in European fish research towards 2020 (**AQUAEXCEL2020**) |
| Plant phenotyping facilities | European Plant Phenotyping Network 2020 (**EPPN2020**) |
| Biotechnology facilities | Industrial Biotechnology Innovation and Synthetic Biology Accelerator (**IBISBA 1.0**) |

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| **ENERGY** | |
| **Type/Area** | **Infrastructure** |
| CO2 capture and storage | European Carbon Dioxide Capture and Storage Laboratory Infrastructure (**ECCSEL**) |
| Electrical laboratories | European Research Infrastructure supporting Smart Grid Systems Technology Development, Validation and Roll Out (**ERIGrid**) |
| Offshore renewable energy | Marine Renewable Infrastructure Network for Enhancing Technologies 2 (**MARINET2**) |
| Biofuels facilities | Biofuels Research Infrastructure for Sharing Knowledge II (**BRISK II**) |
| Smart sensors | European Infrastructure Powering the Internet of Things (**EnABLES**) |

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| **MATERIAL SCIENCES AND ANALYTICAL FACILITIES** | |
| **Type/Area** | **Infrastructure** |
| Micro and nanotechnology facilities | Nanoscience Foundries And Fine Analysis – Europe  (**NFFA**-Europe) |
| Lasers for Laser Science | The Integrated Initiative of European Laser Research Infrastructures (**LASERLAB**-EUROPE) |
| Micro and nanoelectronics labs | Access to European Nanoelectronics Network (**ASCENT**) |
| Light sources | Convenient Access to Light Sources Open to Innovation, Science and to the World (**CALIPSOplus**) |
| Soft matter facilities | European infrastructure for spectroscopy, scattering and imaging of soft matter (**EUSMI**) |
| Mass spectroscopy facilities | European Network of Fourier-Transform Ion-Cyclotron-Resonance Mass Spectrometry Centers (**EU\_FT-ICR\_MS**) |

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| **PHYSICAL SCIENCES** | |
| **Type/Area** | **Infrastructure** |
| Particle Detectors | Advanced European Infrastructures for Detectors at Accelerators (**AIDA-2020**) |
| Accelerators resources | Accelerator Research and Innovation for European Science and Society (**ARIES**) |
| Nuclear physics facilities | European Nuclear Science and Application Research 2 (**ENSAR2**) |
| Nuclear physics facilities | International Development of gAnil-spirAL2 (**IDEAAL**) |
| Neutrons  facilities | The Future of ILL 2030 (**FILL2030**) |
| Radio astronomy facilities | Advanced Radio Astronomy in Europe (**RadioNet**) |
| Optical Infrared facilities | Optical Infrared Coordination Network for Astronomy (**OPTICON**) |
| High-energy astrophysics facilities | Integrated Activities for the High Energy Astrophysics Domain (**AHEAD**) |
| Planetary research facilities | EUROPLANET 2020 Research Infrastructure (**EPN2020-RI**) |
| Balloon telescopes | Integrated access to balloon-borne platforms for innovative research and Technology (**HEMERA**) |

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| **SOCIAL SCIENCE AND HUMANITIES** | |
| **Type/Area** | **Infrastructure** |
| Analytical facilities on Cultural Heritage | Integrated Platform for the European Research Infrastructure ON Cultural Heritage (**IPERION CH**) |
| Inter-disciplinary facilities on Cultural Heritage | European Lexicographic Infrastructure (**ELEXIS**) |

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| **MATHEMATICS AND ICT** | |
| **Type/Area** | **Infrastructure** |
| Data infrastructures | SoBigData Research Infrastructure (**SoBigData**) |
| HPC systems | Transnational Access Programme for a Pan-European Network of HPC Research Infrastructures and Laboratories for scientific computing (**HPC-EUROPA3**) |