

The international debate on NFFA-Europe: Enhancing European competitiveness in nanoscience research and innovation

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NFFA-Europe is a European open-access resource for experimental & theoretical nanoscience that carries out comprehensive projects for multidisciplinary research at the nanoscale ranging from synthesis to nanocharacterization, to theory and numerical simulation. Advanced infrastructures specialized on growth, nano-lithography, nano-characterization, theory and simulation and fine-analysis with Synchrotron, FEL and Neutron radiation sources are integrated into a multi-site combination to develop frontier research on methods for reproducible nanoscience research thus enabling European and international researchers from diverse disciplines to carry out advanced proposals impacting on science and innovation. NFFA-Europe coordinates access to infrastructures on different aspects of nanoscience research that are not currently available at single specialized sites without duplicating specific scopes. Internationally peer-reviewed approved user projects have

access to the best suited instruments, competences and technical support for performing research, including access to analytical large scale facilities, theory and simulation and high-performance computing facilities. Access is offered free of charge to European users. Two researchers per user group are entitled to receive partial financial contribution towards the travel and subsistence costs incurred. The user access scheme includes at least two "installations" and is coordinated via a single entry point portal that activates an advanced user-infrastructure dialogue to build up a personalized access programme with an increasing return on science and innovation production. NFFA-Europe's own research activity addresses key bottlenecks of nanoscience research: i.e. nanostructure traceability, protocol reproducibility, in-operando nano-manipulation and analysis, open data.