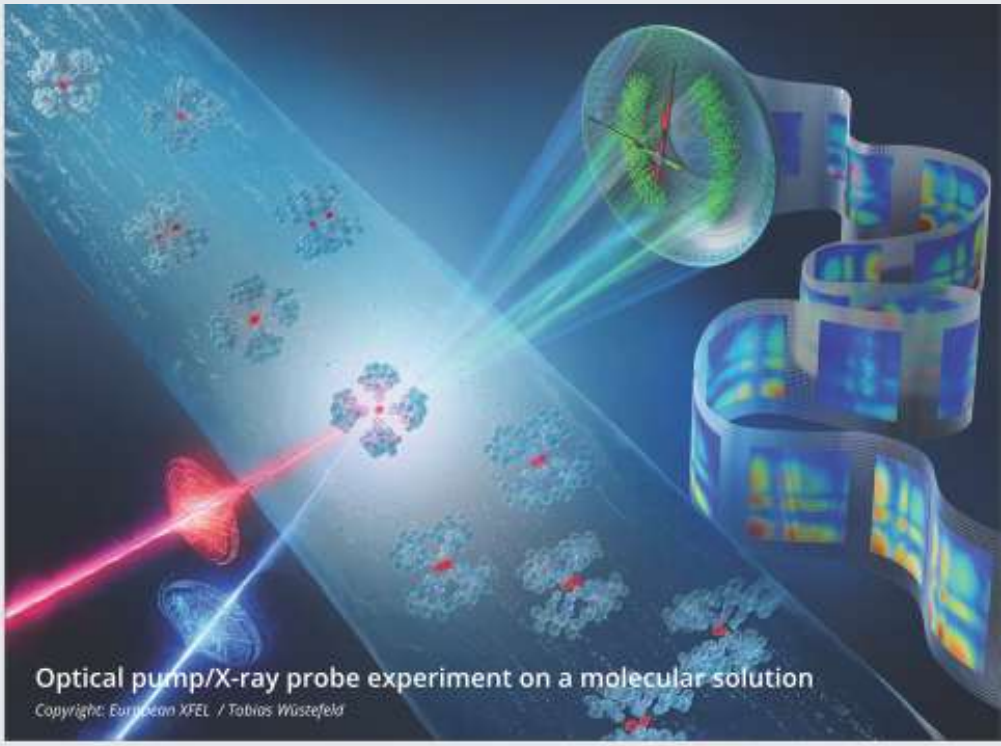
SYNCHROTRON RADIATION IN NATURAL SCIENCE

Biulletin of Polish Synchrotron Radiation Society



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Polish contribution to the European Synchrotron Radiation Facility

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The European Synchrotron Radiation Facility (ESRF) needs no introduction to anyone applying synchrotron radiation in the research. It is currently the most modern research infrastructure located in Grenoble (France), first made available to users in 1994. The construction and operation of such unique and expensive research facility was possible thanks to the creation of an international consortium, which started financing the construction in 1988 and covers the costs of ongoing operation and modernization of the source and beamlines [1]. Polish scientists associated with Polish Synchrotron Radiation Society have been trying to make Poland part of this consortium since 1991.

Thanks to these activities, both at the scientific level (organization of many schools, symposia and specialized workshops in the field of synchrotron techniques) and at the administrative level (letters to the ministry, meetings with ministers, work in groups for large research facilities in the ministry, etc.), Poland

officially joined the ESRF Consortium in 2004 as an associate member with a contribution of 0.6% ESRF annual budget. It was the result of the efforts of the entire Polish synchrotron radiation community represented by prof. Krystyna Lawniczak-Jablonska from Institute of Physics Polish Academy of Sciences, who obtained funding for this purpose for the years 2004-2006 on the basis of an appropriate increase in the subsidy for the IP PAS.

In March 2006, the National Consortium of Scientific Institutions Interested in the Use of the European Synchrotron Radiation Source ESRF was established. The National Consortium initially involved 9 institutes:
1. Institute of Physics, Polish Academy of Sciences, Warsaw
2. Institute of Neurology, Collegium Medium, Jagiellonian University, Krakow
3. Faculty of Physics and Applied Computer Science, AGH University of Science and Technology, Kraków
4. Faculty of Applied Physics and Mathematics, Gdańsk University of Technology
5. Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw
6. Institute of Physics, University of Silesia, Katowice
7. Institute of Experimental Physics, Warsaw University
8. Faculty of Chemistry, Warsaw University
9. Institute of Paleobiology, Polish Academy of Sciences, Warsaw

Presently, the National Consortium involves 20 scientific institutes. Their representatives create the Council of National Consortium. The IP PAS serves as the coordinator.

In 2006, the IP PAS, as the coordinator of the National Consortium, obtained funding within a special project “Poland’s participation in European Consortium of Synchrotron Radiation in Grenoble, France, with a contribution of 1% of the annual budget” for the years 2006-2009, later extended by an annex until 2011. A financial contribution of 1% guarantees 1% of the beamtime available at all beamlines. A settlement for each member is prepared every 3 years. In case more beamtime was granted, a request for additional payment or consent to limit beamtime in the next settlement period is sent. If there was less beamtime granted, there is more allocated in the next period.

In the years 2011-2016, after legal changes in science financing, there was no possibility to make the due contribution to the ESRF. Despite this, while waiting for the Ministry of Science and Higher Education to create an appropriate legal path, the ESRF management still allowed scientists with Polish affiliation to apply for beamtime.

In 2016, the IP PAS, as the coordinator of the National Consortium, obtained funds from the Ministry of Science and Higher Education by decision No. DIR/PM/2016/03 as part of the project called "Support for the participation of Polish research teams in the ESRF and CERN" in order to cover the costs of outstanding financial liabilities to the ESRF for the years 2011-2016.

In the same year, 2016, by decision No. DIR/WK/2016/19 of December 6, the IP PAS obtained funds from the Ministry of Science and Higher Education to finance the costs of the contribution to participate in a joint international project called "European Synchrotron Radiation Facility - Europejskie Centrum Promieniowania Synchrotronowego" . These funds were settled as a grant, based on scientific results from experiments carried out at the ESRF, reported annually to a special commission at the Ministry of Science and Higher Education. Only after the annual report was approved were funds allocated for the next year. The funds were granted for 5 years. They included the Polish financial contribution to the ESRF budget in the amount of 1% of its annual budget. Thanks to the favorable Euro exchange rate during this period, despite the increase of the ESRF budget, we were able to pay the Polish contribution. The project also covered the costs of project management: maintaining the website, participating in the ESRF Council meetings, collecting the results of experiments and preparing reports to the ministry. The leader of this project was also prof. Krystyna Lawniczak-Jablonska. The website and secretarial support for the project was provided by MSc Joanna Libera. Prof. Wojciech Paszkowicz represented Poland in the Administrative and Financial Committee of the ESRF.

In 2015, as a result of the efforts of the IP PAS, ESRF was included on the Polish Roadmap for Research Infrastructures. Poland's participation in the ESRF was also included in the next edition of the Roadmap approved by the Ministry of Science and Higher Education on January 24, 2020.

In 2021, as part of the program of the Ministry of Education and Science "Support for the participation of Polish research teams in the international research infrastructure projects", IP PAS, on behalf of the

National Consortium, obtained a grant titled "Polish contribution to the European Synchrotron Radiation Facility" (AGREEMENT No. 2021/WK/11). As part of the grant, Poland pays 1% of the contribution to the ESRF annual budget. This keeps open the possibility for scientists with Polish affiliation to apply for beamtime. Application for this project and reporting its results to the Ministry of National Education and Science is taken care by PhD Anna Wolska who also represents Poland at the ESRF Council. Project's website is led by MSc Joanna Libera while MSc Anna Reszka represents Poland in the Administrative and Financial Committee.

The ESRF accepts applications for individual projects twice a year: by March 1 and September 10. The scientific program of research conducted at the ESRF is determined by the International Peer Review Committee by ranking the submitted experimental proposals. The Committee is divided on 12 Allocation Panels consisting of outstanding international experts. The final decision on the selection of proposals for implementation is made by the Director General after seeking the opinion of beamline scientists as to the technical feasibility of implementing the project and taking into account the use of beamtime due by a given country in accordance with the contribution made. In the case of projects carried out in international cooperation, beamtime is counted proportionally for a given country, depending on the affiliation of scientists participating in the project, regardless of whether all listed in the project directly participated in the experiment.

Access to the beam for scientists from countries belonging to the ESRF Consortium is covered by contributions paid by individual countries. Additionally, the travel and subsistence expenses of the three researches carrying out the experiment are also paid. Scientific projects that have been granted beamtime receive technical and other necessary assistance during the preparation and conduct of the experiment. The currently implemented ministry grant, in addition to financing a 1% contribution to the ESRF, also offers co-financing for participation in conferences for scientists with Polish affiliation presenting the results of research conducted at the ESRF. The intention is to make it easier for Polish scientists to present the results of their research both internationally and domestically and to establish new scientific contacts at home and abroad. The funding regulations are available on the project website: http://www.ifpan.edu.pl/esrf/

Research results presented at conferences or published in scientific journals must include acknowledgments to the ministry grant financing Poland's access to the ESRF. Exemplary formula: The access to the ESRF was financed by the Polish Ministry of Education and Science, dec. no. 2021/WK/11.

Information about publications, conference presentations, the fact of including the results in a doctoral dissertation or the achievements included in the habilitation should be sent to MSc Joanna Libera (esrf-polska@ifpan.edu.pl). These are measurable project results that influence whether the ministry will continue financial support, and therefore whether Polish scientists will continue to have access to the ESRF.

[1] Anna Wolska and Wojciech Paszkowicz "Poland at the European Synchrotron Radiation Facility: 30 years of history and future prospects" Bulletin of the Polish Synchrotron Radiation Society 22 (2022) 15.