

RP1: Advanced Nano and Microtechnologies

EVALUATION OF RESEARCH PROGRAMME

RP Name: Advanced Nanotechnologies and Microtechnologies
RP Coordinator: Tomáš Šikola

Quality of current research

Assessment:

Scientific performance of almost all groups of RP1 has increased since the start of CEITEC and scientific results are (or are becoming) increasingly comparable to international standards and quality. The number of publications in good journals has become valuable over the years and has reached a high, albeit sustainable, level. There is always room for improvement of quality or to reach an even larger citation number but the size of the output is at a good level.

The panel has identified several groups in the programme which are very industrially oriented and have obtained a considerable number of patents and industrial contracts, as well as spin-off companies.

Recommendations:

Encourage the importance of an ambitious approach to publishing. The impact factor should not drive the research of this RP but should not be completely forgotten either.

Research potential + vision/plans of the Research Programme

Assessment:

The permanent attention of many groups within the RP1 for applicability of their results is appreciated. This might lead to local or international industrial projects but will also boost the generation of potential spin-offs. Moreover, it turns out that the use of nano materials, or even circuits, is very supportive for the cross-disciplinary research between engineering and life sciences within the research program.

Recommendations:

The panel recommends to establish a roadmap for RP1.

The small groups seem to have a clearer and more focused vision and strategy rather than the big groups. The role and future of the big groups should be seriously reconsidered by the whole RP.

Composition of the Research Programme

Assessment:

CEITEC BUT has also created the scientific space for collaborations with other groups in what they call the 'break-through strategy'. A well-defined international collaboration with top-performance institutes is proposed and this will certainly solidify and hopefully raise the quality of the RP1 group to an international top level. The proposed collaboration is sound and somewhat historically substantiated. This is made possible by further European funding. This international collaboration

will also increase the chances for future projects next to becoming attractive for talented researchers from abroad. The first steps made in the Back4Future project were successful and a continuation of the project is very likely.

Recommendations:

The level of interaction between the RGs in the RP is very high. Further integration of research lines is encouraged.

Appropriateness of the operated/planned infrastructure

Assessment:

The adequate use and practical arrangements of the core facilities for nano research have enabled the availability of an important variety of unconventional materials and structures for basic research. The fabrication and characterization are well developed. On a more local level, the advanced instrumentation of the RP1 group has stimulated joint projects on applied and basic research.

Recommendations:

The policy of free access for 1000 €/year is a really good implementation. This should encourage many groups to use and share expertise.

Other

Renegotiations of conditions for MU groups have implications for the strategy of personnel and space allocation. As announced in the Strategic Plan, the position of some groups in the CEITEC research project on material sciences RP1 (Humlicek, Pinkas and Zajickova groups) have altered. It is not clear how a possible further separation between CEITEC BUT and the other groups, mainly at MU, is taking place. It looks as if the interest of MU in material science of RP1 is becoming smaller as their focus of CEITEC MU seems to be on life sciences.

A long-standing dispute on lab space and collaboration with related scientific groups of the home institute at MU exists and this discomfort by the inter-institutional situation is transferred somehow even to the student's level. This makes collaboration with the faculty of science complicated.