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Focus Areas for JIN Activities and Awards

The future success of the Joint Institute for Nanoscience will be linked to our ability to identify large potential project areas where a track record of work involving PNNL and the UW can help both institutions seek significant projects that could have a major impact. Therefore the JIN Steering Committee, the JIN Co-Directors and the Joint Institute Council of Fellows has worked to identify some of the relevant areas of opportunity. A summary of these will be included below. Additional effort will be made to obtain additional information as it becomes available.

Catalysis – A new effort in catalysis is under development by Department of Energy, Office of Basic Energy Science. A relatively small catalysis call is expected in FY03 and a somewhat larger call with a possible request for a Catalysis Center is anticipated in FY04. We see possible opportunities for JIN collaboration in the areas of special nanostructured systems in heterogeneous catalysis and a possible role of similar systems linked with biocatalysis.

Environmental Molecular Sciences Institute – A joint NSF and DOE call is anticipated in FY04 for another round of EMSIs. A current focus is not known, but in the past the foci were defined by the proposing institutions. A nano-bio-catalysis thrust might work here also. It would differ from the catalysis effort in an existing EMSI at Northwestern University. Other ideas may be possible, but would need development.

Nanobiology – A working group has prepared a report on nanobiology for the Department of Energy. The thrust of any BER or BES initiatives in this area is not yet clear, but Viola Vogel (UW) and Allison Campbell (PNNL) are involved in this process and may be able to offer insight as things develop. You will note that parts of nanobiology also fit into the catalysis and EMSI areas.

Homeland/National Security – This is, of course, a large topic for DOE and the nation as a whole. Any efforts need to be well linked to opportunities identified by PNNL NSD staff.

Biotechnology – Both UW and PNNL are having increasing interactions with NIH. Well identified joint interests are highly appropriate in this area.