Letter from the President

NIST’s Contribution to Neutron Scattering in Materials Research

To the Editor:

I am writing to comment on the December 1999 issue of MRS Bulletin. I was disappointed to observe that in an issue dedicated to neutron scattering in materials research, there was no mention of the NIST Center for Neutron Research (NCNR). The NCNR is operated as a national user facility, and it serves more users than all other U.S. neutron sources combined. The facility is located in the Materials Science and Engineering Laboratory of the National Institute of Standards and Technology at the Gaithersburg, MD site. It is the only U.S. facility offering world-class capabilities for both thermal and cold neutron research, with a fully developed cold neutron guide hall and instrumentation.

Much of the research at the NCNR is in the area of materials science, including strong programs in polymer science, highly correlated electron systems, ceramics, measurements of residual stress, powder diffraction, and other areas, including the rapidly growing area of neutron reflectivity (which was barely mentioned). In particular, the NCNR is heavily involved (both for in-house research and by outside users) in the area of soft materials (i.e., polymers, complex fluids, biomaterials, gels...). In fact, in recent years six major prizes have been awarded for work done largely at the NCNR in the general area of soft matter and materials research.

While we at NIST were happy to see the publicity given to the use of neutron techniques, we believe that general reviews in MRS Bulletin should be less parochial than this one was.

J. Michael Rowe
Director, NIST Center for Neutron Research

Response:

As we noted in our introduction it was not our intent to provide comprehensive reviews of the fields described in the short articles contained in the December 1999 issue of MRS Bulletin. Rather, the aim was to give a brief introduction to selected applications of neutrons to problems of interest to the materials science community. If brevity has led to the appearance of a neglect of the important contributions of the NIST facility, then we apologize; that was not the intent. Indeed, NIST has made important contributions to neutron scattering across the range of science addressed in the Bulletin articles. For example, one area of particular significance is in studies of biomolecular materials carried out at NIST using neutron reflectometry highlighted in the article by J.K. Blasie and P. Timmins [page 40].

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