

## GRANT-IN-AID

In order to ensure the ongoing high quality of data in its databases and to have a source of data of important new materials, ICDD offers a Grant-in-Aid Program. This encourages scientists working with new materials to obtain high-quality diffraction data and to submit these data to ICDD for inclusion in the Powder Diffraction File and subsequent publications. Grant-in-Aid (GiA) funding is open to all qualified workers in the X-ray diffraction field. Grants are awarded on a competitive basis. A screening committee composed of ICDD members is in place to review grant proposals, and the ICDD headquarters personnel provide technical assistance and administer the program.

One of the main objectives of the ICDD Grant-in-Aid Program is to provide high-quality diffraction data on materials new to the PDF that have industrial or regulatory significance. The success of the Grant-in-Aid Program can be seen by the steady rise in the percentage of high-quality (star) entries as the collective experience level of the grantees has increased with time. More than 85% of all GiA patterns published are star quality.



Through the grant process, semiconductor materials, electronic materials, pharmaceuticals and catalysts have been targeted for inclusion and added to the PDF database.

Many of the ICDD's technical subcommittee task groups review data in the File and recommend target materials for study. Users of the database are also welcome to suggest target materials. Many of the materials in the PDF are a direct result from past member and user suggestions. The Editor Emeritus compiles a list of desired new materials submitted by the task groups. A grantee can either propose a list of materials for study or get high-priority candidates suggested by the Editor Emeritus.

The program is international with 61 grantees in fiscal year 2006–2007 located in 12 countries. The duration of a Grant-in-Aid is 12 months with two cycles per year. Cycle I begins 1 April and Cycle II begins 1 October.

### Grant-in-Aid Web Processes

Since the last *Public Report*, an automated internet process has been developed and implemented. The process allows submission and critical reviews of grant proposals through the internet. One advantage of this process is that proposed materials can be prescreened

by grantees, prior to grant submission, by checking an on-line listing of the hundreds of thousands of materials currently published in the PDF and the tens of thousands of materials being processed at any given time in the editorial system. The grantees are urged to check their proposed compounds by a Chemical and Element Search link before submitting their new proposals. This link is updated by the ICDD Science Department twice a year, in December and June, synchronized with the two yearly grant cycles.

Another advantage of this system is that the Grant-in-Aid Committee can remotely perform reviews and discuss proposals through a combination of internet correspondence and conference calls. Proposals, principle investigator CVs, and prior publication records are available for review by the committee. This allows the committee to be composed of international expert members, corresponding from different countries and continents of the world. Reviews are done remotely over a period of several weeks.

The review meetings have transitioned to a conference call discussion of reviewer findings and results. The transformation of this process was essential for ICDD to keep pace with the large size of the database and to take advantage of international expertise for grant submission and critical evaluation.

### Grant-in-Aid Workshop—Novosibirsk, Russia

The workshop was held on 18–20 October 2005, at the Institute of Solid State Chemistry and Mechanochemistry (Siberian Branch of the Russian Academy of Science) and at the Novosibirsk State University. Sixty-six participants attended the workshop. Among them, 20 came from different regions of Siberia and 46 participants from Novosibirsk academic institutes and State University. The non-Novosibirsk participants came from Krasnoyarsk (2 participants), Ulan-Ude (2), Omsk (2), Barnaul (1), Irkutsk (1), Tomsk (5), Tyumen (1), Kemerovo (2), Novokuznetsk (1). Seven current and past ICDD grantees participated in the workshop: Drs. Kirik, Vasiliev, Khaikina, Shmakov, Gromilov, Lisoivan, and Prosenko.



Workshop participants at the entrance of the Institute of Solid State Chemistry and Mechanochemistry (Siberian Branch of the Russian Academy of Science).

The first three lectures were delivered by John Faber, Evgeny Antipov and Elena Boldyreva at the Novosibirsk State University. These lectures were attended by students of this university and the workshop participants (more than 100 participants). The rest of the program took place at the Institute of Solid State Chemistry and

Mechanochemistry. The program was very well organized by the local organizing committee headed by Prof. Elena Boldyreva and Prof. Vladimir Boldyrev.

On 17 October 2005, a two-hour meeting was organized with the ICDD grantees and scientists involved in the ICDD Grant-in-Aid Program at Moscow State University. This meeting was attended by 14 people.

Recent grant workshops have combined Grant-in-Aid topics with scientific programs on materials characterization through X-ray analysis. This format was first used at Novosibirsk and subsequently at the 2006 Chinese National Meeting in Hangzhou, China. Both workshops were well attended.

## Distinguished Grantee

At the spring 2007 ICDD Technical Committee Meeting in Newtown Square, Pennsylvania, Dr. Sergei Kirik of Russia will be presented with the ICDD Distinguished Grantee Award.

Dr. Kirik was born in Krasnoyarsk. He received his Masters of Science degree from the Novosibirsk State University (1981). He became of Post-Graduate student at the Institute of Inorganic Chemistry, Russian Academy of Sciences and then received his Ph.D. from the Institute of Inorganic Chemistry, USSR Academy of Sciences in 1981. In 1993, he received a Doctorate Degree in Chemical Sciences at the Institute of Inorganic Chemistry, Russian Academy of Sciences with his thesis, "Modern Methods of X-ray Powder Diffraction and its applications to the Tasks of Inorganic Chemistry."

It is an interesting fact that during the period of his Ph.D. thesis preparation (in 1979), he received support and advise from Prof. G.G. Johnson, Jr., (Materials Research Lab., Pennsylvania State University). Ten years later, he received similar advise from Prof. D.K. Smith. They have both been past Chairmen of the ICDD Board of Directors.

Dr. Kirik became a Senior Teacher at the Institute of Non-Ferrous Metals in Krasnoyarsk. He then became a Senior Researcher at the Institute of Chemistry and Chemical Technology, Russian Academy of Sciences. Presently, he is the Head of the Laboratory of the X-ray Structure Investigations at the Institute of Chemistry and Chemical Technology of the Russian Academy of Sciences in Krasnoyarsk and Professor/Chair of Inorganic Chemistry at the State Academy of Non-Ferrous Metals and Gold in Krasnoyarsk. His primary research interests include inorganic chemistry: complex compounds, binary and ternary oxide systems, super and ionic conductors, ceramics and mesostructured materials. His scientific contributions include pattern indexing, full profile refinement, image recognition techniques for powder patterns, simulating annealing in structure determination, and using continuous density techniques for modeling nanostructures. He has published over 190 articles in scientific publications.

The ICDD Distinguished Grantee Award is presented to a grantee who has demonstrated exceptional contributions to ICDD through Grant-in-Aid activities. Dr. Kirik was introduced to the ICDD Grant-in-Aid Program in 1993. Since then, he has contributed over 600 patterns, with 95% of those being of "\*" quality. Dr. Kirik has been an ICDD member since 1997.

Congratulations to Dr. Sergei Kirik, the ICDD Distinguished Grantee. Dr. Kirik, joining his predecessors, Professors Evgeny Antipov, Shao-Fan Lin, and Ekkehart Tillmanns, has become the fourth recipient of this award.

