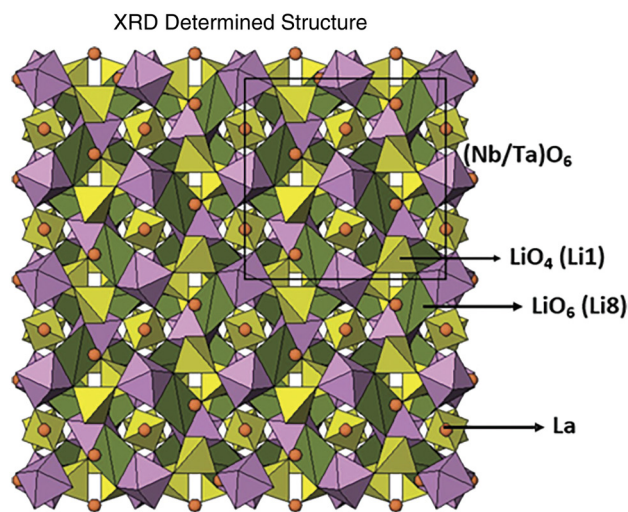
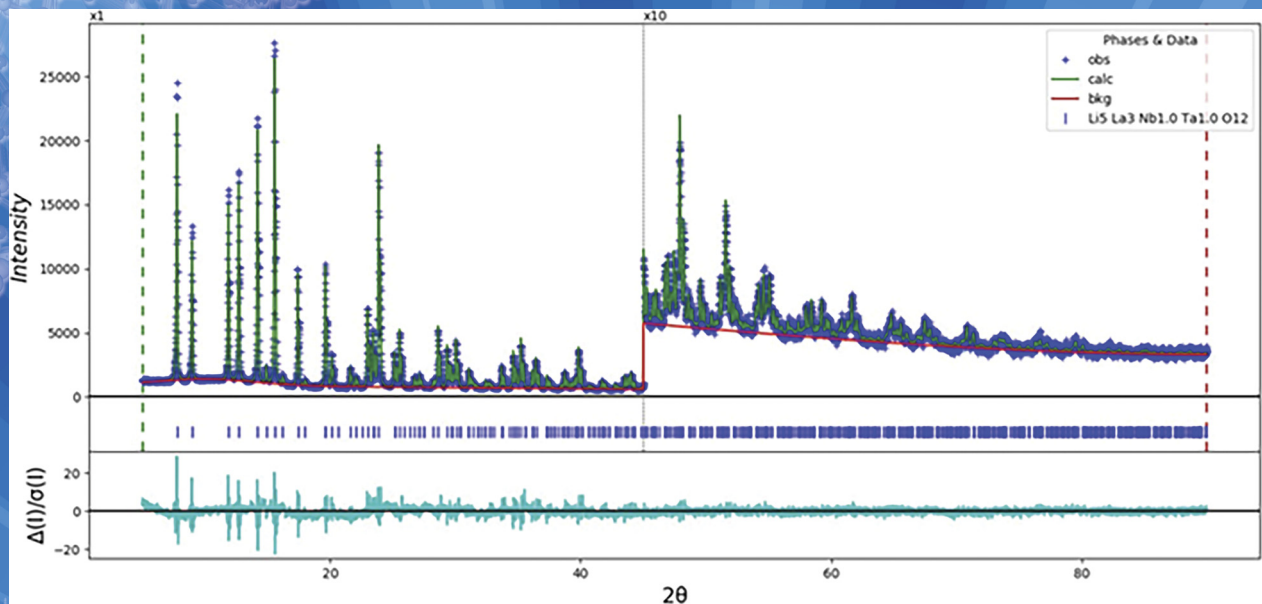
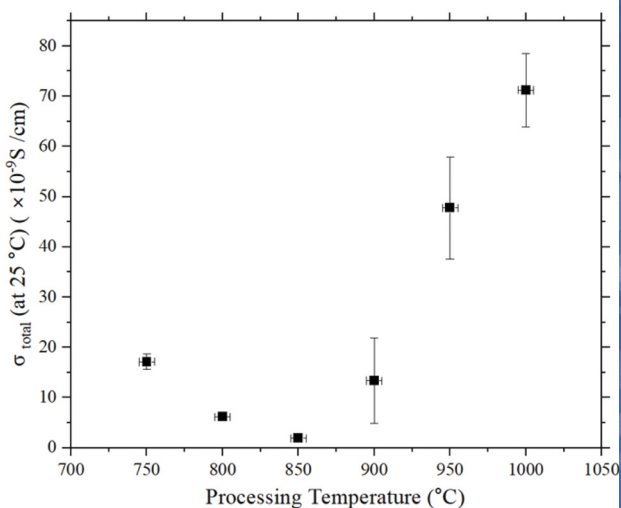


Powder Diffraction PDJ

Journal of Materials Characterization



Total Conductivity vs Processing Temperature



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Aims & Scope

ICDD's quarterly, and special topical issue, international journal, *Powder Diffraction*, focuses on materials characterization employing X-ray powder diffraction and related techniques. With feature articles covering a wide range of applications, from mineral analysis to epitactic growth of thin films to advances in application software and hardware, this journal offers a wide range of practical applications. ICDD, in collaboration with the Denver X-ray Conference Organizing Committee, has increased services for the subscribers of Powder Diffraction and authors of Advances in X-ray Analysis. Beginning in 2006, ICDD offered a copy of the previous year's edition of AXA to Powder Diffraction institutional subscribers who receive both print and on-line versions. This effectively doubles the number of articles annually available to Powder Diffraction subscribers and significantly increases the circulation for the authors in Advances in X-ray Analysis.

Subject coverage includes:

- Techniques and procedures in X-ray powder diffractometry
- Advances in instrumentation
- Study of materials including organic materials, minerals, metals and thin film superconductors
- Publication of powder data on new materials

International Centre for Diffraction Data

The International Centre for Diffraction Data (ICDD[®]) is a non-profit scientific organization dedicated to collecting, editing, publishing, and distributing powder diffraction data for the identification of materials. The membership of the ICDD consists of worldwide representation from academe, government, and industry.

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On the Cover: The cover figure for this issue of *Powder Diffraction* highlights the manuscript “Crystal Chemistry of Garnet Type Solid State Electrolyte, $Li_{5-x}La_3(NbTa)O_{12-y}$ ”. This material is being considered as a potential all-solid-state Li-ion battery with inorganic solid-state electrolytes. The authors Kafle, Wong-Ng, Oleshko, Stafford, Kaduk, Eufrazio, Pegg and Dutta used not only X-ray Diffraction but also SEM/TEM and Electrochemical Impedance Spectroscopy to characterize the samples and to determine the Li ion positions and occupancies. The study showed that the highest ionic conductivity for the samples sintered at 1000 C.