

## Thermally Stable Solid Electrolyte

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- Researchers at **BITS Pilani** have **developed a solid-state energy storage device in the form of thermally stable solid electrolyte** for lithium-ion plus batteries and super capacitors, as a part of research supported by the FIST program of Department of Science and Technology (DST).
- It is functionally effective in high temperature ranging from 30 to 500 degree Celsius. The performance of the Lithium ion would be improved. The existing ion batteries have certain limitations, such as, reliance on liquid electrolytes and a limited range of operating temperatures.
- The team has used DST FIST-supported High-temperature X-ray diffraction (HTXRD) facility Rigaku Smart Lab, which is particularly useful for the thermal stability assessment of novel solid electrolytes. The XRD patterns were obtained in situ up to 500°C.
- It is to be noted that To promote research work Department of Science and Technology (DST), in 2000-01 started 'Fund for Improvement of S&T Infrastructure in Higher Education Institutions (FIST) programme.

