

HQ Lithium for Rechargeable Batteries and Metal Air Batteries

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HQ starts to work of lithium metal with polymer electrolyte in lithium rechargeable batteries in 1980. Batteries research has expanded worldwide. Several new polymer and solid electrolytes with improved conductivity has resulted from a better understanding of the major parameters controlling the ion migration, such as favorable polymer structure, phase diagram between solvating polymer and lithium salt and, the development of new lithium counter-anions. In spite of the progress so far, the quest for a highly conductive dry polymer at room temperature is still continuing and all lithium polymer battery (LPB) developers presently face the options: whether to heat the polymer electrolyte to enable high-power performance, as required for the electric vehicle and energy storage.

LPB have brought many developers to choose the first or second approach or at least consider it as a worthy alternative to be explored.

This presentation covers some overview and the progress in developing Lithium-metal-based batteries made from dry polymer or ionic liquid-polymer electrolytes for rechargeable lithium batteries and Li-air batteries.