**Development of functionalized coated separator for next generation Li ion batteries**

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Li ion batteries are enabling a revolution in energy storage and now the most common battery type used in modern electric vehicles. Their higher energy density makes them preferable in the automotive industry required longer driving range, but they should ensure higher safety level even under abnormal conditions such as thermal exposure, mechanical crush and electrical overcharge. Traditionally, polyolefin porous films were employed as separator for permeable to ionic flow but preventing electric contact of the electrodes. However, it requires functionalized coating layer to allow more safety for EV application. After LG Chem commercialized ceramic coated separators for the first time in the world in 2006, various functional coating layers have been proposed for better cell performance and safety. In this talk, it briefly covers historical review on coated separator and introduces new development strategy in coating layer for next generation Li ion batteries.