Abstract: The proceedings contain 69 papers. The topics discussed include: design of a porous cathode structure of high performance Li-ion battery; surface enhancement approach for FDM rapid prototypes by organically modified montmorillonite nanoparticles; Zr-based metal-organic framework with dual Brønsted acid-base functions; phase evolution criteria for AlCoCrCuFeMnSix (x = 0, 0.3, 0.6 and 0.9) high entropy alloys based on experiment and thermodynamic calculation; evaluation of laser induced breakdown spectroscopy for analysis of annealed aluminum germanium alloy at different temperatures; evaluation of the fine blanking tool for the precise clutch cam of automobile seat lifter pumping device; safety evaluation of casing string based on BP artificial neural network; synthesis and characterization of rare earth activated barium zirconate ceramic; effect of source temperature on the electrical transport, microstructural and optical properties of tin monosulfide thin films prepared by close spaced sublimation method; temperature-dependent electrical transport characteristics of p-SnS/n-WO3:Sb heterojunction diode; the influence of double pitting corrosion on casing collapsing strength based on different ellipsoid shape; mechanical properties of poly(propylene fumarate)/nanotube composites: experimental results and theoretical predictions; and conceptual metadata model for sensor data abstraction in IoT environments.