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Enhanced Optical and Electrical Properties of Polymer-Assisted All-Inorganic Perovskites for Light-Emitting Diodes[1] JAVON KNOX, Florida State University — Highly bright light-emitting diodes based on solution-processed all-inorganic perovskite thin film are demonstrated. The cesium lead bromide ($CsPbBr_3$) created using a new poly(ethylene oxide)-additive spin-coating method exhibits photoluminescence quantum yield up to 60% and excellent uniformity of electrical current distribution. Using the smooth $CsPbBr_3$ films as emitting layers, green perovskite-based light-emitting diodes (PeLEDs) exhibit electroluminescent brightness and efficiency above 53 000 cd m^{-2} and 4%: a new benchmark of device performance for all-inorganic PeLEDs.

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