
DC-Driven Stretchable Light-Emitting Devices Based on Perovskite Nanocomposites

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Emerging soft electronics are mechanical stretchable and have pushing the boundaries of rigid devices. Among them, electroluminescence (EL) devices with superior mechanical compliance have inspired many applications such as stretchable display, biomedical imaging, various sensors etc. These devices require narrow emission spectrum, high luminescence and good stretchability to improve the functionality. Challenge in intrinsically stretchable EL devices persists in fabricating stretchable emission layer under such conditions. This issue can be addressed by adoption of composites using perovskite nanocrystals (NCs) in the polymer matrix. In this study, we are going to demonstrate stretchable dc-driven light-emitting devices based on perovskite NCs. The photophysical properties of NCs are measured by time-correlated single photon counting (TCSPC), photoluminescence. As a result, we have successfully fabricated stretchable EL devices based on perovskite NCs. To improve the EL performance additives in the active layer were adopted.