

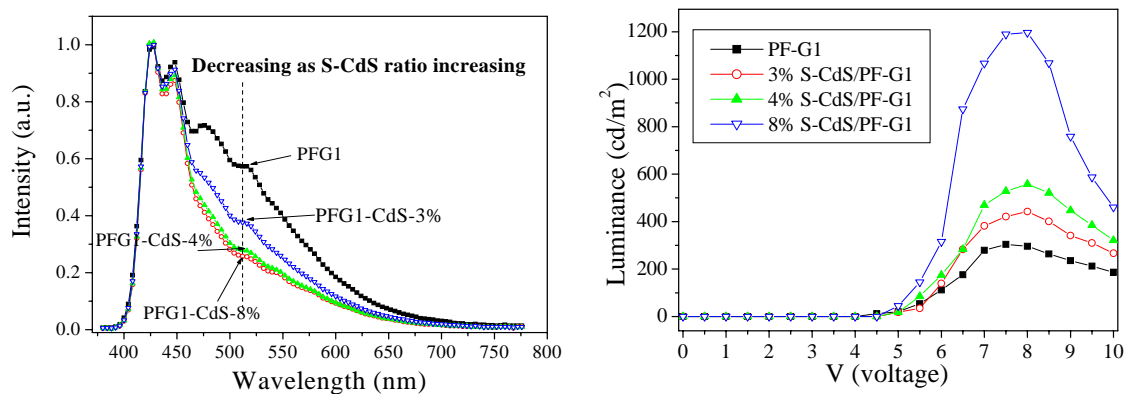
# Thiophenol-modified CdS nanoparticles enhance the luminescence of benzoxyl dendron-substituted polyfluorene copolymers

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We have prepared highly luminescent dendron-substituted copolyfluorenes that incorporate surface-modified cadmium sulfide nanoparticles. A small percentage of these nanoparticles can be incorporated into the dendritic structures upon tailoring the interfaces between the ligands on the nanoparticles and the dendritic structures in the copolyfluorene. Both the photoluminescence and electroluminescence efficiencies of the polymer nanocomposites are dramatically enhanced sometimes by more than double relative to the values of the pure polymer.



Left: Normalized electroluminescence spectra of devices prepared from S-CdS/PF-G1 in the configuration ITO/PEDOT/polymer/Ca/Al.

Right: L-V curves of devices prepared from S-CdS/PF-G1 in the configuration ITO/PEDOT/polymer/Ca/Al.