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**Electroluminescence of Conjugated Rigid-rod Polymer Tuned by Emission Layer Thickness** SHIH JUNG BAI, HUA-WEI TSENG, Institute of Materials Science and Engineering, National Sun Yat-sen University, JEN-WEI HUANG, Department of Chemistry, ROC Military Academy — *Bilayered* light emitting diodes were fabricated with fully conjugated rigid-rod polymer poly-*p*-phenylenebenzobisoxazole (PBO) on top of hole conducting poly(3,4-ethylenedioxythiophene):poly(styrene sulfonate) (PEDOT:PSS) using indium-tin-oxide on glass as the substrate and also the electron injecting cathode. The hole injecting anode was Al vacuum evaporated onto the PBO layer. Electroluminescence emission was obtained showing a *blue* shift in emission  $\lambda_{max}$ . together with a lowered threshold voltage for the *bilayered* polymer diodes having a smaller PBO layer thickness. When the PBO thickness changing from 90 nm to 27 nm with a constant PEDOT:PSS layer thickness of 54 nm, the  $\Delta\lambda_{max}$ . and the  $\Delta V_{threshold}$  were 70 nm and 3.5 V, respectively.

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