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Synthesis green emitting PPV thin film via solvent free chemical vapor deposition DONGDONG JIA, SEAN GEHART, LENU ZAMANN, DUSTIN KERN, ANURA GOONEWARDEN, Lock Haven University of Pennsylvania, NANOTECH TEAM — A solvent free chemical vapor deposition (CVD) system was built to prepare PPV thin film. α,α' -dibromo-p-xylene is used as a precursor. The precursor is heated at the precursor chamber to 90 °C to sublimit the materials at a base pressure for about 2-3 mTorr. A N₂ carrier gas is used to deliver the precursor molecules to the reaction chamber. The reaction chamber pressure is kept at 5-40 mTorr with a temperature for about 800 °C. Si and ITO substrates are used in the condensation chamber for deposition. Photoluminescence spectra are measured for the deposited PPV.

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