

Abstract Submitted
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Developing a procedure for the fabrication of PLED structures for an advanced undergraduate lab¹ JORDAN PEREZ, TONI SAUNCY, Angelo State University — Using polymer materials in thin layers to fabricate Light Emitting Diode (LED) structures is a topic of much current research. Because the structures are composed of commercially available polymers, they have become accessible as tools for teaching at the undergraduate level for advanced labs. At Angelo State, the fabrication of polymer-based LED structures is being pursued in order to develop a procedure that can be reproduced easily by undergraduate students. The structure consists polymer layers: PEDOT:PSS–MEH-PPV sandwiched between Indium Tin Oxide (ITO) coated glass slides. An Indium Gallium Eutectic metal layer on the ITO serves as the cathode, while the bottom ITO layer serves as the anode. Devices have been fabricated which emit light in response to an external voltage as low as 7V. The results have been inconsistent primarily due to the difficulties in layering the polymers uniformly on the ITO substrates. An inexpensive spin coater is used to deposit polymer layers; determining the proper spin rate and controlling the spin rate are thought to be the primary issues in producing uniform layers.

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Toni Sauncy
Angelo State University

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