Materials for Organic Light Emitting Diodes

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Abstract

This presentation will show performance data concerning several materials suitable for use in Organic Light Emitting Diode (OLED) devices. Among these materials are those suitable for use in either small molecule OLED devices or polymeric OLED devices. Some are potentially suitable, in certain instances, for use in both types of devices. The polymeric materials are in the poly(phenylenevinylene) (PPV) or poly(para-phenylene) (PPP) families. Shown will be some materials that can be doped with certain specific metal complexes to give red, green, and blue (RGB) emissions. Also described will be some Group III compounds which can be used as either emitters themselves or as dopants (to other emitters) to obtain light emitted at desired wavelengths. Finally, there will be a short discussion about processes that improve the synthesis and physical properties (i.e., Tg) of certain polymeric OLED materials.

Biography

Dr. Underwood received his Ph.D. in Physical Organic Chemistry from the University of Nebraska, Lincoln. He was employed by Eastman Kodak Company for 27 years, where he did research and development on cyanine dyes, thin-film clinical diagnostic products and processes, digital medical imaging, and digital printing plates, with patents in these areas. He was also Manager, Worldwide Corporate Sourcing (Chemicals) for Kodak for five years. He joined H. W. Sands Corp. as Vice President in June, 1998.