Seminar 3

OLED*

VIRTUAL LAB

Preparation of an Organic Light Emitting Diode

OLED: J Chem Education

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1. UVOD – SVJETLEĆE DIODE

- LED

Fig. 1. (A) 1880s illustration of the nightly illumination of a gaslight with a thorium oxide-soaked mantle. (B) Replica of Edison’s lamp. (C) Contemporary compact fluorescent lamp. (D) High-pressure sodium lamp.

Solid-State Light Sources Getting Smart
The electroluminescence of organic materials
rekombinacija naboja

Investigating Bandgap Energies, Materials, and Design of Light-Emitting Diodes
3. ORGANSKE SVJETLEĆE DIODE: PRIMJER LABORATORIJSKE PRIPREME

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3. ORGANSKE SVJETLEĆE DIODE: PRIMJER LABORATORIJSKE PRIPRAVE
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\[ \text{Ru}^{3+} + \text{Ru}^+ \rightarrow \text{Ru}^{2+} + (\text{Ru}^{2+})^* \]

The Ru$^{2+}$ complex ion in the excited state decays to the ground state, through phosphorescence, emitting light (red-orange, $\lambda = 630$ nm) as it does.
3. ORGANSKE SVJETLEĆE DIODE: PRIMJER LABORATORIJSKE PRIPRAVE
4. PRIMJER OLED: Karakterizacija

Solid-State Organic Light-Emitting Diodes Based on Tris(2,2'-bipyridine)ruthenium(II) Complexes

Frank G. Gao and Allen J. Bard*

Figure 1. Structure of the OLED cell.
4. PRIMJER OLED: Karakterizacija
5. PRIMJENA OLED uređaja – izvor bijelog svjetla

White Organic Light-Emitting Diodes