Special Issue

Enhancement Strategies for High External Quantum Efficiency of Organic Light Emitting Diodes (OLEDs) and the Analyses

Message from the Guest Editor

One of the important electroluminescence (EL) characteristics of OLED is the external quantum efficiency (EQE). EQE is defined as the ratio of number of photons emitted from outside the OLED device to number of electrons injected into the device. Various devices have been fabricated to increase the EQE value, for example, in the fluorescence or phosphorescence emitting device, the thermally assisted delayed fluorescence (TADF) device, the ultraviolet, blue, green, red, or near-infrared emitting device, the small-molecule or polymer device, the tandem device inserted charge generation layer, the device for display, the fluorescence device with hyperfluorescent technology, the device for lighting, and the flexible device. EQE is currently given by equation of direct product of charge balance factor, singlet/triplet production ratio, photoluminescence quantum yield, and out-coupling factor. This Special Issue provides the previous and latest significant device design strategies in these devices to increase the EQE value, and also introduces the methods to understand the obtained EQE value and the dependence on current density.

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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