

Abstract Submitted
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Physics of Electroluminescent Devices Based on Ionic Transition Metal Complexes GEORGE MALLIARAS, JASON SLINKER, Cornell University — A recent trend in OLEDs involves the use of ionic transition metal complexes as the electroluminescent layer. The mechanism of operation of OLEDs based on these materials is determined by a complex interplay between ionic and electronic charge. We carry out forward time integration of rate equations to solve the bipolar current problem in the presence of ionic charge. We discuss the transient behavior of the current and radiance, as well as steady-state parameters (electric field and charge distribution, recombination profile) as a function of the mobilities of electronic and ionic carriers.

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