

Between Maxwell and Born–Infeld

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We present some recent results on a model of electromagnetic theory obtained from a Lagrangian density \mathcal{L}_q depending on the parameter q : for $q = 1$, \mathcal{L}_q corresponds to the Born–Infeld Lagrangian density and, for $q = 2$, it restores the Maxwell one. In particular we consider the electrostatic case (in the presence of an assigned magnetic field) for $q \in [1, 2)$ and the magnetostatic case for $q \in (6/5, 2)$.