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Electron EDM and $\Gamma(\mu \rightarrow e\gamma)$ in the 2HDM

We present the first complete two-loop calculation of the electric dipole moment of the electron, as well as the rates of the lepton-flavor violating decays $\mu \rightarrow e + \gamma$ and $\tau \rightarrow e/\mu + \gamma$, in the unconstrained two-Higgs doublet model. We include the most general Yukawa interactions of the Higgs doublets with the Standard Model fermions up to quadratic order, and allow for generic phases in the Higgs potential.

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