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Stability of Nonlinear Charged Black Holes in Anti-de Sitter Quasi-Topological Gravity

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In this paper, we investigate the stability of nonlinear charged black holes in quartic quasitopological gravity in the presence of a nonlinear electromagnetic field. The entropy of the charged black holes of fourth order quasitopological gravity through the use of Wald formula is computed and the mass, temperature and the charge of these black holes are found as well. We show that black holes with spherical, flat and hyperbolical horizon in quasitopological gravity are stable for any allowed quasitopological parameters.

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