

# Radiative neutrino masses, lepton flavor mixing and muon $g - 2$ in a leptoquark model

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We propose a leptoquark model with two scalar leptoquarks  $S_1(\bar{3}, 1, \frac{1}{3})$  and  $\tilde{R}_2(3, 2, \frac{1}{6})$  to give a combined explanation of neutrino masses, lepton flavor mixing and the anomaly of muon  $g - 2$ , satisfying the constraints from the radiative decays of charged leptons. The neutrino masses are generated via one-loop corrections resulting from a mixing between  $S_1$  and  $\tilde{R}_2$ . With a set of specific textures for the leptoquark Yukawa coupling matrices, the neutrino mass matrix possesses an approximate  $\mu$ - $\tau$  reflection symmetry with  $(M_\nu)_{ee} = 0$  only in favor of the normal neutrino mass ordering. We show that this model can successfully explain the anomaly of muon  $g - 2$  and current experimental neutrino oscillation data under the constraints from the radiative decays of charged leptons.

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