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Quang Dao, Christina Meng, Julian Wellman, Zixuan Xu, Calvin Yost-Wolff and Teresa Yu* (twyu@umich.edu). *Polytopal Realizations and Faces of Extended Nestohedra*.

Motivated by Laurent phenomenon algebras developed by Lam and Pylyavskyy, we introduce a family of simple convex polytopes called *extended nestohedra*. These polytopes extend the well-studied nestohedra and generalize the graph cubeahedra introduced by Devadoss, Heath and Vipismakul. We show that extended nestohedra share many important properties with nestohedra, such as being realizable as the boundaries of simple polytopes and having non-negative γ -vectors when the polytopes are flag. We also identify isomorphisms between duals of extended nestohedra and duals of nestohedra. (Received July 23, 2020)