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Radmila Sazdanovic* (rsazdan@ncsu.edu), Department of Mathematics NC State University, PoBox 8205, Raleigh, NC 27695, and **Alex Chandler, Salvatore Stella** and **Martha Yip**. *On the strength of Khovanov-type categorification of the Stanley symmetric function.*

We investigate the strength of chromatic symmetric homology as a graph invariant. Chromatic symmetric homology is a Khovanov-type categorification of the chromatic symmetric function for graphs. Its Frobenius characteristic is a q,t generalization of the chromatic symmetric function. We exhibit three pairs of graphs where each pair has the same chromatic symmetric function but distinct homology. We also show that integral chromatic symmetric homology contains torsion, and based on computations, conjecture that \mathbb{Z}_2 -torsion in bigrading $(1,0)$ detects nonplanarity in the graph. (Received September 14, 2020)