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**Christopher Eppolito, Jaiung Jun\*** (junj@newpaltz.edu) and **Matt Szczesny**. *Hopf algebras for matroids over hyperfields*.

In their recent paper, Baker and Bowler introduced the notion of matroids over hyperfields which unifies various generalizations (including oriented, valuated, and phase matroids). One can generalize the notion of minors and direct sums (of matroids) to the case of matroids over hyperfields. In particular, this allows one to generalize the matroid-minor Hopf algebra to this setup, which could enable one to approach questions of matroids over hyperfields via these Hopf algebras. We also investigate the category of (ordinary) matroids, showing that the matroid-minor Hopf algebra is dual to the Hall algebra associated to the category of matroids. This is joint work with Chris Eppolito and Matt Szczesny. (Received August 09, 2019)