

## Factorizations of Hopf quasigroups

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**Abstract.** In this paper, we introduce the notion of factorization in the Hopf quasigroup setting, and we prove that if  $A$  and  $H$  are Hopf quasigroups such that their antipodes are isomorphisms, a Hopf quasigroup  $X$  admits a factorization as  $X = AH$  iff  $X$  is isomorphic to a double cross product  $A \bowtie H$  as Hopf quasigroups.

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