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Hannah L Altmann* (hannah.altmann@ndsu.edu). *Semidualizing modules over tensor products*. Preliminary report.

Let R be a commutative, noetherian ring with identity. A finitely generated R -module C is *semidualizing* if the homothety map $\chi_C^R : R \rightarrow \text{Hom}_R(C, C)$ is an isomorphism and $\text{Ext}_R^i(C, C) = 0$ for all $i > 0$. For example, R is semidualizing over R , as is a dualizing module, if R has one. In some sense the number of semidualizing modules gives a measure of the “complexity” of R . We are interested in that number. We will discuss constructing semidualizing modules over tensor products of rings over a field. In particular, this gives us a lower bound on the number of semidualizing modules over the tensor product. (Received July 24, 2014)