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Hannah Altmann* (haltmann@morris.umn.edu). *Semidualizing DG Modules over Tensor Products.*

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 measures the severity of the singularity of R . We are interested in that number. We can extend this idea to semidualizing complexes of R and generalize even further over Differential Graded (DG) algebras. We will discuss constructing semidualizing DG modules over tensor products of algebras over a field. In particular, this gives us a lower bound on the number of semidualizing DG modules over the tensor product. (Received August 30, 2015)