

Structure of H-semiprime artinian algebras

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Abstract

Let H be a Hopf algebra over a field. It is proved that every H -semiprime right artinian left H -module algebra A is quasi-Frobenius and H -semisimple. If H grows slower than exponentially, then all H -equivariant A -modules are shown to be A -projective. With the additional assumption that H is cosemisimple it is proved that the Jacobson radical of any right artinian left H -module algebra is stable under the action of H . © 2010 Springer Science+Business Media B.V.

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Keywords

Equivariant modules, Hopf algebras, Hopf module algebras, Quasi-Frobenius rings