ON THE COFINITENESS OF GENERALIZED LOCAL COHOMOLOGY MODULES (SCIE)

Nguyen Tu Cuong, Shiro Goto, Nguyen Van Hoang

TÓM TẮT:

Let R be a commutative Noetherian ring, I an ideal of R and M, N two finitely generated R-modules. The aim of this paper is to investigate the I-coniteness of generalized local cohomology modules $H^j_I(M;N)$ of M and N with respect to I. We first prove that if I is a principal ideal then $H^j_I(M;N)$ is I-cofinite for all M;N and all j. Secondly, let t be a non-negative integer such that $\dim\Supp(H^j_I(M;N))<=1$ for all j < t. Then $H^j_I(M;N)$ is I-cofinite for all j < t and $Hom(R/I;H^t_I(M;N))$ is finitely generated. Finally, we show that if $\dim(M)<= 2$ or $\dim(N) <= 2$ then $H^j_I(M;N)$ is I-cofinite for all j.