

## Reactions of Insecticides with Atmospheric Species: Predicting Products of the Thiamethoxam + OH Reaction

Jamilah Sullivan and Mychel Varner  
Dept. of Chemistry, Iona College, New Rochelle, NY

Thiamethoxam is a neonicotinoid insecticide that is widely used throughout the world. Multiple studies probe the potential links between neonicotinoid insecticides and negative effects on the health and population of wild bees and honey bees. Neonicotinoids that are present on crop surfaces are exposed to reactive atmospheric species such as hydroxyl radicals (OH). In this study, our goal is to examine thiamethoxam reactions with OH, which include H abstraction and OH addition. The two pathways were investigated and the resulting products were predicted.

