

Employing Multicomponent Reactions for Rapid Assembly of Heterocyclic Analogs

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Abstract: To create more effective and/or crop-specific herbicides, it could be conceivable to alter the chemical structures of substances with existing registrations. Using the photosystem II (PS II) inhibitor bromoxynil, broadleaf weeds may be controlled in a variety of agricultural and speciality crops. A medication with little herbicide resistance is paired with transgenic techniques that enable herbicide tolerance in agricultural plants. The University of Tennessee in Knoxville recently produced a novel pyridine N-oxide, a previously synthesized pyridine, and a new pyrimidine. The herbicidal effectiveness of pigweed, cotton, velvetleaf, huge crabgrass, and pitted morning glory was evaluated against new bromoxynil analogues in addition to soybean. The rate used was 0.28 kg ha⁻¹ bromoxynil per hectare

Keywords: Heterocyclic, Synthesis, Analogues

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