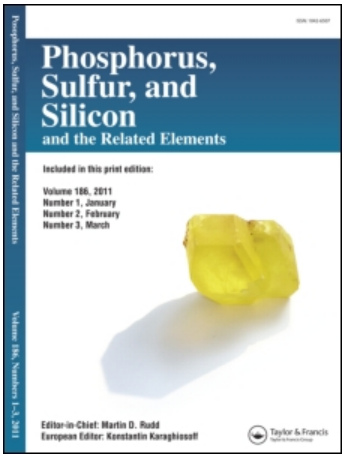

Phosphorus, Sulfur, and Silicon and the Related Elements

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Structure-Activity Studies of Aminophosphonic Derivatives of Fluorene

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Structure-Activity Studies of Aminophosphonic Derivatives of Fluorene

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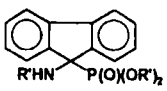
The aminophosphonic acid derivatives of fluorene of the general structure:



represent an interesting class of plant growth regulators. Some of our compounds happen to be of high biological activity, comparable with known herbicide- N-phosphonomethylglycine. In this paper present a mathematical model of dependence of biological as a function of molecular features.

Structure - activity dependence of over 100 aminofluorenephosphonic acid derivatives was studied and compared with other aminophosphonates. It was found that herbicidal activity of the studied compounds depends on the hydrophobic parameters, and in a smaller extent on the electronic parameters of the substituents on nitrogen and phosphorus atoms and is independent on their steric parameters[1].

Structure activity studies suggest also that mechanisms of their activity is different than that of N-phosphonomethylglycine but similar to the mechanism of action of TRAKEPHON®.

References

[1] R. Gancarz, M. Dudek, Phosphorus, Sulfur and Silicon **114,** 135 (1996).