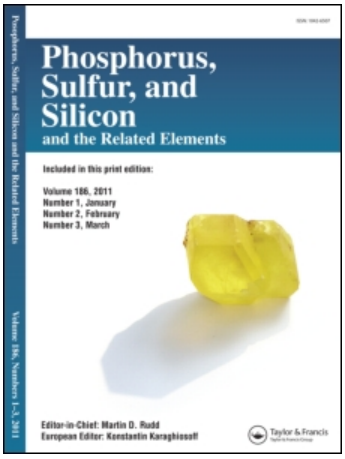

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SYNTHESES OF α-BROMOACYL AND 2-AMINOTHIAZOLO-4-HYDROXYCOUMARINES

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SYNTHESES OF α-BROMOACYL AND 2-AMINOTHIAZOLO-4-HYDROXYCOUMARINES

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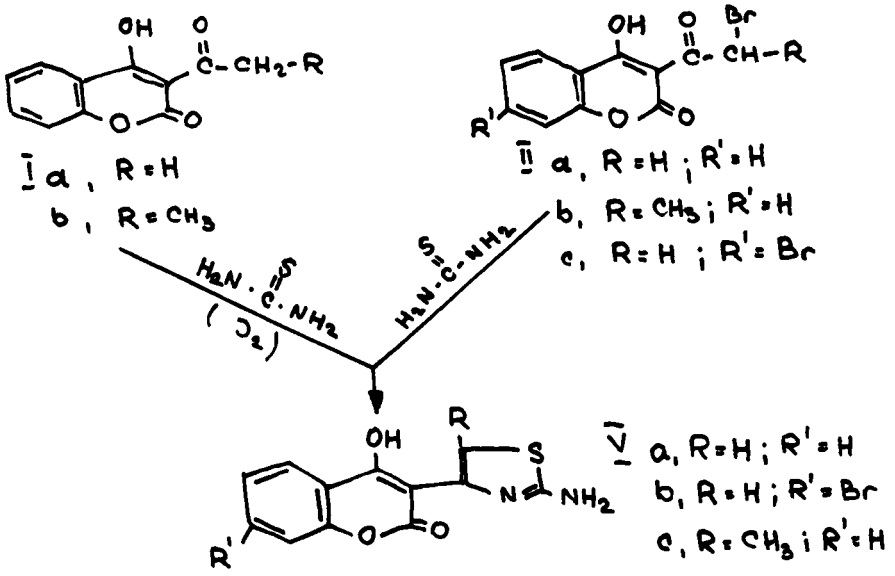
Halogenated, amino, and acyl derivatives of 4-hydroxycoumarin act as insecticides, bactericides, and fungicides.

On potassium persulfate-catalysed halogenation of 3-acyl derivatives I a, b with equimolar bromine in glacial acetic acid, 3-(α-bromoacyl)-4-hydroxycoumarin II a,b formed within ten minutes, in more than 90% yields. With excess bromine and extension of the reaction time to 5 hrs a 3-(α-bromoacyl)-4-hydroxy-7-bromocoumarin (II c) was obtained.



We have also tried to obtain thiazolo-substituted derivatives of 4-hydroxycoumarin by condensation of 3-(α-bromoacyl)-4-hydroxycoumarins (II) or 3-acyl-4- hydroxycoumarins (I) with thiourea, in the presence of iodine. Either attempt yielded the expected 2-amino-4-(4-hydroxycoumarin-3-yl)-thiazoles(V), but yields were much better with II than with I as the starting compound.