

Effects of Substituents on s-Triazine Reactivity

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Triazine and its derivatives an important class of heterocyclic compounds have been intensively studied for decades. The oldest known isomer of it, s-triazine or 1,3,5 triazine is the most widely used one due to its availability in various areas such as textile, plastic rubber industries in addition to its usage as pesticides, dye-stuffs, optical bleaches polymer photo-stabilizers or antitumor agents. The most commonly preferred starting material to obtain functionalized s-triazines is cyanuric chloride which is highly reactive three chlorosubstituted s-triazine, since it provides controlled stepwise substitution through the chlorine atoms. In the study, cyanuric chloride is reacted with one and two equivalents of amine or phenol reactive nucleophiles which may contain electron donating or withdrawing groups at different positions. Besides, the further substitution of chlorines on mono- or di-amino substituted s-triazines by different hydroxyl groups are performed by nucleophilic aromatic substitution reaction. Here, the effect of each subsequent substitution of chlorine atoms on s-triazine reactivity will be clarified. It is supposed that resonance and inductive effects of reactive substituents as well as steric effect of the groups on them will change the reactivity of remaining chlorines.

Biography:

Sedef Ozcan graduated from Bogazici University with a bachelor's degree in chemistry. She is a teaching assistant and has been doing PhD in chemistry at Bogazici University. Previously, she taught in organic and physical chemistry laboratories. She is currently teaching in general chemistry laboratory for freshmen. She is experienced inorganic synthesis of various triazines, some acrylic monomers with their radical polymerizations as well as purification and characterization of these materials. Besides, she has ability to analyse the compounds with different chromatographies, spectrophotometries. She likes listening to jazz and blues, playing tennis in addition to hiking and camping.