Unexpected Formation of a 1,2-Dichloroacenaphthylene in a Friedel-Crafts Reaction with Chloral Hydrate

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An unprecedented rearrangement was encountered during an attempted alkylation of an electron-rich naphthalene with chloral hydrate. The reaction produced a dichlorinated acenaphthylene and presumably involves the intermediate formation of a chloronium ion which is opened to produce the five-membered ring of the final product.

Key words: Electrophile, Rearrangement, X-Ray Crystallography, Cyclization