

UV-tunable laser induced photolysis of matrix isolated anisole.

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Streszczenie

Photochemical transformations of matrix-isolated anisole (AN) were induced using UV-tunable laser radiation. The progress of reactions was followed by FTIR spectroscopy that allowed for identification of several photoproducts. They were distinguished according to their different patterns of bands intensity changes during the progress of photolysis. Among these products the phenoxy and methyl radicals were observed that recombined to form two isomers of methylcyclohexadienone (ANO). The *ortho* isomer readily decomposed producing different isomers of long-chain ketene and bicyclohexenone molecules. Decarbonylation was also detected in the studied systems. Interpretation of the experimental observations was supported by DFT calculations at the B3LYP/6-311++G(2d,2p) level.

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