

STUDIES ON REACTIVE INTERMEDIATES. III. REACTION
OF DIKETENE WITH 3-AMINO-1,2,4-TRIAZINES.

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Reaction of diketene with amino heterocycles has been reported to proceed through acetoacetylation of amino group and further cyclization to give new cyclic compounds, respectively. In this paper, we wish to report a new type of the reactivity of diketene toward 3-amino-5,6-disubstituted-1,2,4-triazine derivatives (I a, b). 3-amino-5,6-dimethyl-1,2,4-triazine (I a) was allowed to react with diketene in aprotic and/or protic solvents to give the pyrimido[3,2-b]-1,2,4-triazine derivative II. Structure assignment was based on the spectral data, elemental analysis, and chemical reactions of the product. On this basis, the reaction has been considered to proceed through addition of two moles of diketene to one mole of aminotriazine derivative (I a), with elimination of one mole CO_2 . Reaction of 3-amino-5,6-diphenyl-1,2,4-triazine (I b) with diketene proceeded through conventional method to yield the acetoacetyl derivative III, and 3-pyridyl-1,2,4-triazine derivative IV, respectively.

