

The cycloaddn. of diphenylnitrilimine with coumarin and chromone gave the cycloadducts I and II, resp. The structures of these products were based on elemental and spectral analyses and alternate synthesis. The cycloaddn. of PhCCl:NNHPh (I) to a series of coumarins in C₆H₆ and Et₃N gave benzopyrano[4,3-c]pyrazoles II (R = H, Ac, Bz, EtO₂C, R₁ = H; R = H, R₁ = 7-OMe, 8-Me). In EtONa-EtOH, the reaction between coumarin and I afforded no cycloadducts, but yielded o(EtO₂CCH:CH)C₆H₄OCPH:NNHPh. The Et₃N-catalyzed dehydrochlorination kinetics of EtO₂CCCl:NNHR (I; R = 3- or 4-Me, -Cl, -NO₂, 4-CO₂Et or -Ac, H), detd. in 4:1 (vol./vol.) dioxane-H₂O at 30°, were pseudo 1st order in Et₃N. The overall 2nd order rate consts. had an LFER with ρ- 0.533 which is consistent with a mechanism involving a fast reversible deprotonation step, leading to the conjugate base of I, followed by rate-detg. loss of Cl⁻. The ρ- for each of these steps were estd.