

photoproducts in the
ELIS *et al.*, 1977; COR-

been elicited to DNA
omycin-C is a strong
a minor modification
as cross-links between
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unogen was prepared
the presence of single-
in the addition of the
(TOMASZ *et al.*, 1974).

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ture with 0.1 $\mu\text{g/ml}$
immunofluorescence.

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Both agents produce
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1973; LEWIS *et al.*,
ky DNA lesions give
in DNA; the lesions
however, are antigenic
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ERA. M. (1977) *Photochem.*

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Dielectric perturbation of hydrogen-bonded systems by high electric fields. //

The paper deals with the effect of high electric fields on chemical equilibria involving hydrogen bonding in nonpolar medium. A condition for perturbation by the field is the different polarity of the reaction partners. The nonlinear dielectric response of the perturbed systems is measured in the frequency domain (1-100 MHz) with a particular technique developed in the laboratory (HELLEMANS & DE MAEYER, 1975; PERSOONS & HELLEMANS, 1978).

The systems analysed so far include the association of ϵ -caprolactam in cyclohexane, the association of *n*-butanol in paraffine, the complexation with proton transfer of 2,4,6-trichlorophenol and triethylamine in cyclohexane (DE MAEYER *et al.*, 1979). The reactions are all extremely fast (nearly diffusion-controlled) and a variety of nonlinear effects of different origin is encountered. Amplitudes provide thermodynamic information (K , μ) which matches the kinetic results obtained from the relaxation times.

The helix-coil equilibrium in polypeptides is established by competition between internal hydrogen bonding and bonding to solvent molecules. Measurements on some synthetic polypeptides (PBLA and PCBL with trifluoroacetic acid in benzene) are discussed; interference from nonlinear effects not related to the field-promoted conformational change is illustrated. The systems stand as model for field-dependent membrane processes as conditions of polarity and field strength (100 kV/cm) are comparable in both situations.

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