The Role of Exciton Dynamics in Photorefractivity in Organic Semiconductors

MOHAMMAD SAMIULLAH, Truman State University — A theory of the photorefractive effect in organic photorefractive materials based on formation, diffusion and dissociation of excitons in organic polymer semiconductors will be presented. A comparison with experimental results shows that the exciton dynamics plays an important role in the creation of the space charge field, and should be considered when selecting candidates for photorefractivity in organic systems.