The Origin of Spectral Effects in Photosynthesis

Yuzeir Zeinalov

Institute of Biophysics, Bulgarian Academy of Sciences, Academic G. Bonchev str., bl. 21, Sofia 1113, Bulgaria. E-mail: zeinalov@bio21.bas.bg

Z. Naturforsch. **64c**. 680–686 (2009); received May 11/June 29, 2009

The non-linearity of photosynthetic light curves and the real reasons leading to the appearance of the "red drop of quantum efficiency" and "enhancement" (Emerson's second) effects are presented. On the contrary to the generally accepted interpretation that these effects are induced from the participation of the two different photochemical systems, it is shown that they are simply a direct consequence of the initial non-linearity of the photosynthetic light curves.

Key words: Photosynthetic Light Curves, Action Spectra of Photosynthesis, Red Drop Effect, Enhancement Effect