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## Abstracts of Short Communications and Posters

### Section:

## 16. Applications

1991 MS Classification: 92

Dubinsky, Andrej J., Keldysh Insititute of Applied Mathematics Moscow, Russia

**Mathematical Modelling of electron and proton Transport in Chloroplasts**

A mathematical model is constructed of electron transport coupled with transmembrane transfer of protons in chloroplasts. It is assumed that the rate of electron transfer is controlled by the value of the intrahylacoid pH, hence depends on mechanisme of proton leakage through the thylacoid membrane and also on its geometric form. The set of equations for describing the processes of interest contains non-linear and "diffusion" terms. The results are agree with the experimental data.

Reference: Dubinskii, A. Yu, Tikhonov A. N. Regulation of electron and proton transport in chloroplasts. .. Biophysics, Vol. 42, No. 3, pp. 639 - 655.