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## **Dynamics in photosynthetic transient complexes studied by paramagnetic NMR spectroscopy**

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**Dynamics in photosynthetic transient complexes  
studied by paramagnetic NMR spectroscopy**

***Sandra Scanu***

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Sandra Scanu

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# **Dynamics in photosynthetic transient complexes studied by paramagnetic NMR spectroscopy**

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door

**Sandra Scanu**

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in 1981

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***dedicated to my beloved sister  
who always encourages me  
to follow my aspirations***

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## Abbreviations

<b>ET</b>	Electron transfer
<b>Pc</b>	Plastocyanin
<b>Cyt <i>f</i></b>	Cytochrome <i>f</i>
<b><i>N</i></b>	<i>Nostoc</i> sp. PCC 7119
<b><i>Ph</i></b>	<i>Phormidium laminosum</i>
<b><i>b<sub>6</sub>f</i></b>	Cytochrome <i>b<sub>6</sub>f</i>
<b>PSI</b>	Photosystem I
<b>NMR</b>	Nuclear magnetic resonance
<b>HSQC</b>	Heteronuclear single quantum coherence
<b>CSP</b>	Chemical shift perturbation
<b>PCS</b>	Pseudocontact shift
<b>PRE</b>	Paramagnetic relaxation enhancement
<b>BD</b>	Brownian dynamics
<b>MC</b>	Monte Carlo
<b>MES</b>	2-( <i>N</i> -morpholino) ethanesulfonic acid
<b>MTS</b>	(1-Acetoxy-2,2,5,5-tetramethyl- $\delta$ -3-pyrroline-3-methyl) methanethiosulfonate
<b>MTSL</b>	(1-Oxyl-2,2,5,5-tetramethyl- $\delta$ -3-pyrroline-3-methyl) methanethiosulfonate
<b>CoM</b>	Center of mass



**“Così tra questa immensità s’annega il pensier mio:  
e il naufragar m’è dolce in questo mare.”**

*- In such immensity my thinking drowns and it is sweet to shipwreck in this sea-*

Giacomo Leopardi, L'infinito, 1818-1819.

