

Recent progress in photo-CIDNP MAS NMR

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(1) New review

Very recently, a new review about the history of the solid-state photo-CIDNP effect has been published. [1]

(2) Theory & method development

Based on previous field-cycling MAS NMR data, magnetic field and orientation dependence were included into the theory. [2] “Spin-torch” experiments, transferring hyperpolarization into the cofactor pocket were reported. [3,4]

(3) Analysis of photosynthetic reaction centers (RCs)

Structural studies on the donors of photosystem II [5], photosystem I [6] and purple bacterial reaction centers [7] demonstrated their differences.

(4) Flavoproteins as agent for Photo-CIDNP MAS NMR

A LOV domain, i.e., a flavoprotein, shows a significant solid-state photo-CIDNP effect and allows for studying the mechanism by mutagenesis of the electron donating aromatic amino acid. [8-10]

References

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