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Towards photo-CIDNP MAS NMR as a generally applicable enhancement method

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Propositions

belonging to the thesis
“Towards photo-CIDNP MAS NMR as a Generally Applicable Enhancement Method”

1. Hyperpolarization methods will determine the future of solid state NMR.

(Chapter 1, This thesis)

2. Heliobacteria are photochemically active in both the anaerobic and aerobic forms.

(Chapter 2, This thesis)

3. Photo-CIDNP experiments at low field can reveal the electron-spin density distribution for the special pair triplet state in *Rhodobacter sphaeroides* R26 RCs.

(Chapter 3, This thesis)

4. The solid-state photo-CIDNP effect is not a peculiarity of photosynthetic RCs.

(Chapter 4, This thesis)

5. The solid-state photo-CIDNP effect of a system is related to its radical pair lifetime.

(Chapter 5&6, This thesis)

6. Contrary to common belief, heliobacterial reaction centers may represent an evolutionary ancestor of the photosystem I reaction center.

(Chapter 2, This thesis)

7. Light-dependent bird navigation is controlled by magnetoreception via a radical pair.

(Chapter 4, This thesis)

8. Efficient use of solar energy is the only remedy for the future energy crisis, especially in developing countries.

9. Hard work alone is not the recipe for success, hard work and good food is.

Smitha Thamarath Surendran