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Magn. Reson. Discuss., referee comment RC1
https://doi.org/10.5194/mr-2021-16-RC1, 2021

Comment on mr-2021-16

Peter Hore (Referee)

Referee comment on "Real-time nuclear magnetic resonance spectroscopy in the study of biomolecular kinetics and dynamics" by György Pintér et al., Magn. Reson. Discuss., https://doi.org/10.5194/mr-2021-16-RC1, 2021

An excellent review and an enjoyable read. A fitting tribute to Rob.

I spotted a trivial number of minor inaccuracies and spelling errors.

Lines 50, 53, 55: by describing photo-CIDNP dyes as “fluorescent” and “fluorophores” you give the impression that fluorescence if somehow essential for the generation of nuclear polarization. Efficient fluorescence in competition with intersystem crossing would, of course, be a distinct disadvantage in sensitivity terms.

Line 54: did you mean to include phenylalanine amongst the list of polarizable amino acids?

Line 183: **photoactive** yellow protein?

Line 187: shouldn’t **free enthalpy** be simply **enthalpy** or **enthalpy change**?

Line 278: **dilution** factor?

Lines 283-284: incomplete sentence?

Lines 304 and 330: CIDNP not CINDP

Lines 306-307: "influenced by the hyperfine coupling constants of the present magnetic field" makes no sense.

Line 361: irradiation with argon-ion laser light?

Line 456: channel **rhodopsin**

Line 548: **nitrobenzyl**

Line 670: longitudinal **proton** relaxation time?

Not all abbreviations are defined (or used more than once). While I think this is acceptable for NMR pulse sequence acronyms, there are others which will be less familiar to readers of this review, for example: FAD, FMN, GPCR, TFE, DMSO, CSNB, D+PHS, RAS, TET2, …