

Hyperpolarised Organic Phosphates as NMR Reporters of Compartmental pH - DTU Orbit (08/11/2017)

Hyperpolarised Organic Phosphates as NMR Reporters of Compartmental pH

Organic phosphate metabolites contain functional groups with pK_a values near the physiologic pH range, yielding pH-dependent ^{13}C chemical shift changes of adjacent quaternary carbon sites. When formed in defined cellular compartments from exogenous hyperpolarised ^{13}C substrates, metabolites thus can yield localised pH values and correlations of organellar pH and catalytic activity.

General information

State: Published

Organisations: Center for Hyperpolarization in Magnetic Resonance, Department of Electrical Engineering, Center for Magnetic Resonance, Department of Chemistry, Organic Chemistry

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Number of pages: 4

Pages: 2288-2291

Publication date: 2016

Main Research Area: Technical/natural sciences

Publication information

Journal: Chemical Communications

Volume: 52

ISSN (Print): 1359-7345

Ratings:

BFI (2017): BFI-level 2

Web of Science (2017): Indexed Yes

BFI (2016): BFI-level 2

Scopus rating (2016): CiteScore 6.06 SJR 2.506 SNIP 1.159

Web of Science (2016): Indexed yes

BFI (2015): BFI-level 2

Scopus rating (2015): SJR 2.664 SNIP 1.314 CiteScore 6.7

Web of Science (2015): Indexed yes

BFI (2014): BFI-level 2

Scopus rating (2014): SJR 2.701 SNIP 1.446 CiteScore 6.83

Web of Science (2014): Indexed yes

BFI (2013): BFI-level 2

Scopus rating (2013): SJR 2.755 SNIP 1.38 CiteScore 6.73

ISI indexed (2013): ISI indexed yes

Web of Science (2013): Indexed yes

BFI (2012): BFI-level 2

Scopus rating (2012): SJR 3.09 SNIP 1.347 CiteScore 6.21

ISI indexed (2012): ISI indexed yes

Web of Science (2012): Indexed yes

BFI (2011): BFI-level 2

Scopus rating (2011): SJR 2.857 SNIP 1.322 CiteScore 5.96

ISI indexed (2011): ISI indexed yes

Web of Science (2011): Indexed yes

BFI (2010): BFI-level 2

Scopus rating (2010): SJR 2.709 SNIP 1.232

Web of Science (2010): Indexed yes

BFI (2009): BFI-level 2

Scopus rating (2009): SJR 2.588 SNIP 1.252

Web of Science (2009): Indexed yes

BFI (2008): BFI-level 2

Scopus rating (2008): SJR 2.791 SNIP 1.236

Web of Science (2008): Indexed yes

Scopus rating (2007): SJR 2.851 SNIP 1.237

Web of Science (2007): Indexed yes

Scopus rating (2006): SJR 2.366 SNIP 1.183

Web of Science (2006): Indexed yes

Scopus rating (2005): SJR 2.129 SNIP 1.15

Web of Science (2005): Indexed yes

Scopus rating (2004): SJR 1.954 SNIP 1.158

Scopus rating (2003): SJR 1.644 SNIP 1.098

Web of Science (2003): Indexed yes

Scopus rating (2002): SJR 1.956 SNIP 1.19

Web of Science (2002): Indexed yes

Scopus rating (2001): SJR 1.817 SNIP 1.098

Web of Science (2001): Indexed yes

Scopus rating (2000): SJR 1.649 SNIP 1.028

Web of Science (2000): Indexed yes

Scopus rating (1999): SJR 1.454 SNIP 0.947

Original language: English

Electronic versions:

SM4.pdf. Embargo ended: 17/12/2016

DOIs:

10.1039/C5CC09790H

Source: PublicationPreSubmission

Source-ID: 118949177

Publication: Research - peer-review › Journal article – Annual report year: 2015