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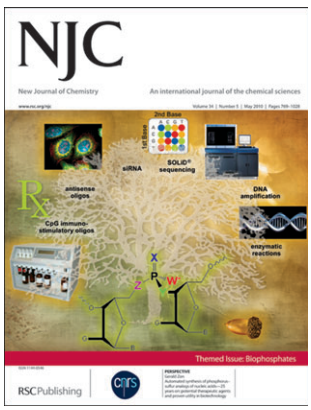
IN THIS ISSUE

ISSN 1144–0546 CODEN NJCHES 34(5) 769–1028 (2010)

Cover

See G. Michael Blackburn *et al.*, pp. 784–794.
Thermonuclear reactions generate phosphorus in supernovae (Kepler, 1604). Iron phosphide (Schreibersite) is a meteoritic component that enriches phosphorus abundance in primitive habitable planets. Prebiotic chemistry generates phosphate esters that, through biological evolution, make an RNA world (ribozymes and ribosomes) and life. Phosphate esters can be predicted to fulfil related roles on other habitable planets. Cover images used with permission from NASA and Prof. Venki Ramakrishnan, LMB, Cambridge, and constructed using PyMOL software.
Matthew W. Bowler, Matthew J. Cliff, Jonathan P. Waltho and G. Michael Blackburn, *New J. Chem.*, 2010, **34**, 784.



Inside cover

See Gerald Zon, pp. 795–804.
Since 1984, fully-automated solid-phase synthesis of oligonucleotides having phosphorothioate (W or X = S) or, eventually, phosphorothiolate (Y or Z = S) linkages has enabled the continuous growth of diverse applications, such as those depicted here. Gerald Zon, *New J. Chem.*, 2010, **34**, 795.

EDITORIALS

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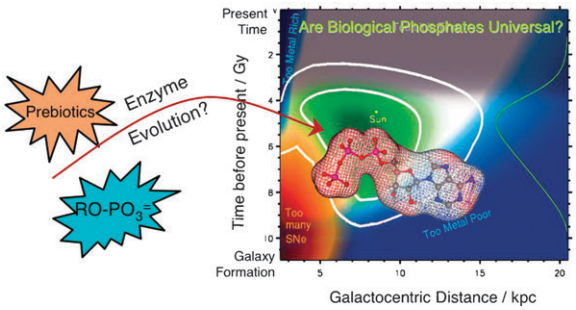

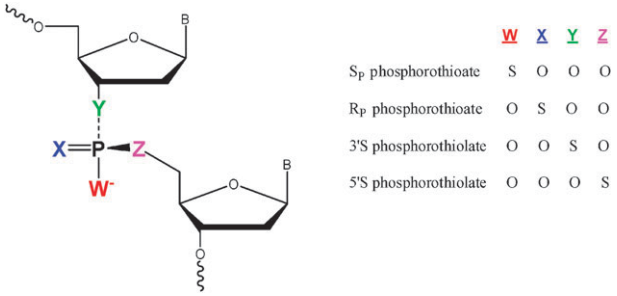

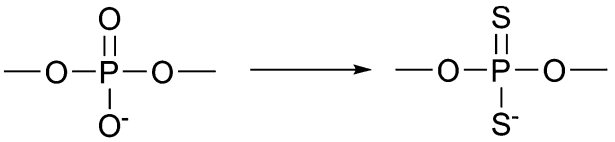

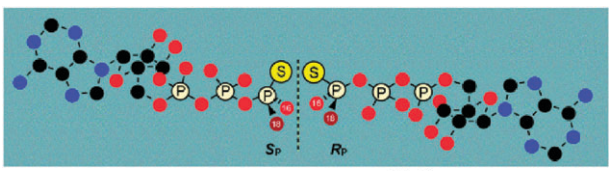

P-Chiral epimers of ATPγSγ^{17}O,^{18}O

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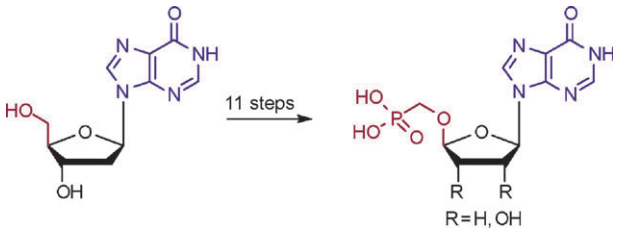
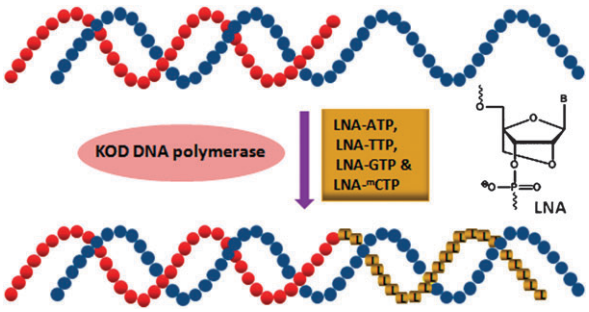
LETTERS





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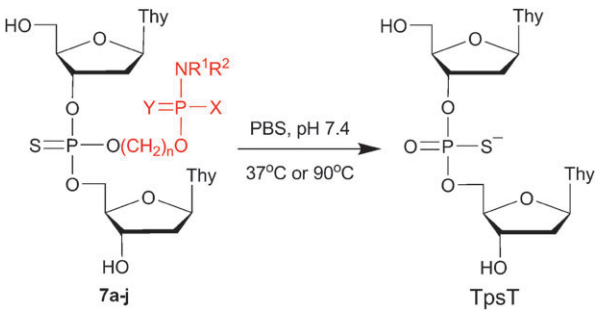
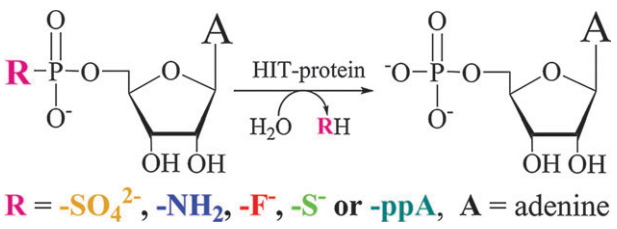
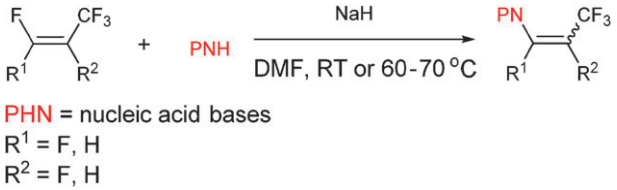
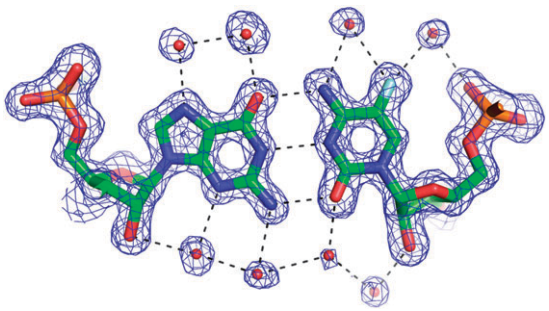
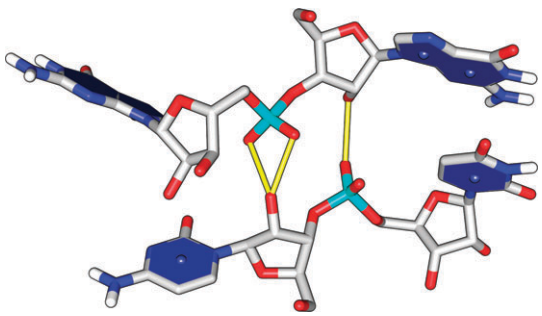
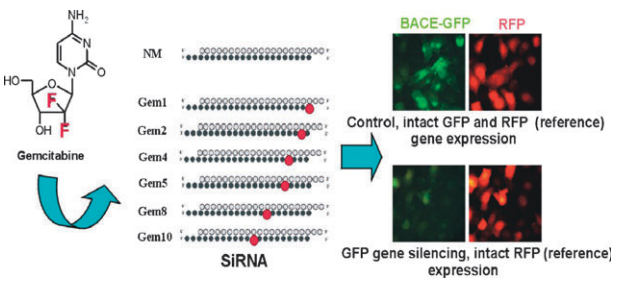


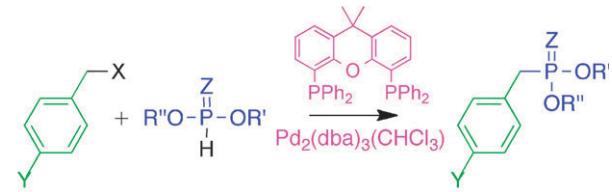




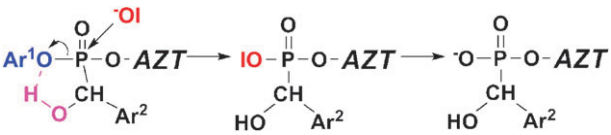


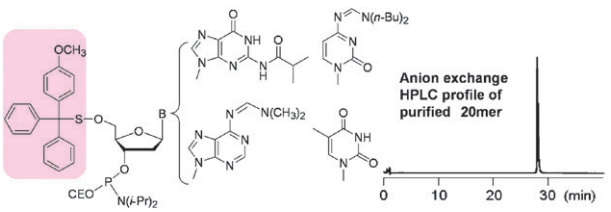


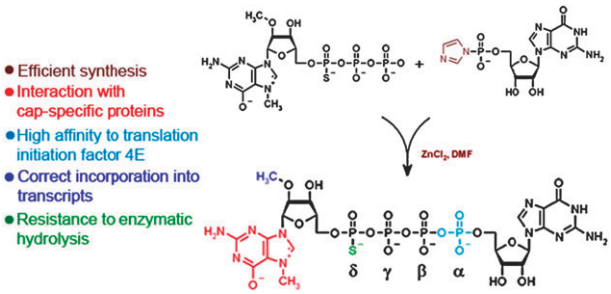




X = Cl, Br; Y = H, F, Cl, Me, OMe; Z = O or S; R' and R" = alkyl, aryl , or a nucleoside moiety







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