level of enrichment should have provided a 1:1 peak area ratio for the Gp(^{18}O)C and Gp(^{16}O)C peaks. As shown in Figure 1, however, the ratio of the ^{18}O isotope shifted signal to the unlabeled GpC signal is only 0.20:1. Similarly while the ratio of the ^{17}O-labeled signal of ApG (obtained by difference) to the ^{18}O-labeled signal of ApG fits nicely with the original ^{17}O and ^{18}O enrichement of the water, the ^{16}O-labeled signal is much larger than would be expected on basis of the 9.9% ^{16}O content of the ^{17}O water. Thus, as also noted by Seela et al.,[8] the phosphite must undergo oxidation by molecular oxygen, or extraneous water (all ^{16}O of course) in the iodine oxidation step must still be present in our dried nonaqueous solvents. This does not present any problem, however, for our signal identification methodology.

As pointed out by Petersheim et al.[9] oxygen labeling of the nucleic acids is clearly a superior method for ^{31}P signal assignment compared to methods dependent upon correct (and often difficult) assignment first of the ^{1}H NMR signals.[16,17] Perhaps even greater utilization of this phosphoryl oxygen-labeling method will develop since rapid and convenient introduction of the labels requires no special capability other than the scale-up of the highly efficient solid-phase phosphoramidite synthesis as shown here. Using the two-dimensional ^{31}P/^{1}H correlated spectral methods,[16] we can now unambiguously identify the ^{1}H NMR signals coupled to the *assigned* ^{31}P signals. Because of spectral overlap, even with 2-D methods, ^{1}H signal assignments in oligonucleotides much longer than tetramers will be difficult.[18] However, this should not be a problem using the ^{31}P-labeling method combined with 2-D NMR techniques. It should also be noted that we have been able to identify all three ^{31}P signals from a doubly labeled tetramer. Since we can introduce different ratios of the three oxygen isotopes at each cycle of the phosphite oxidation, there should be no difficulty in assigning at least six or more phosphate signals in each preparation of a labeled hexamer or even larger oligomer.

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Additions and Corrections

A Simple Model for the Interaction Potentials in Electron-Transfer Reactions: Application to the H_2^+/H_2 System [*J. Am. Chem. Soc.* **1983**, *105*, 6775.]. Chyuan-Yih Lee and Andrew E. DePristo*

Page 6778: Equations 44e and 44f are incorrect. They should read:

$$V_{\mathrm{DD}}^{(\mathrm{e,B+})} = \sum_{i=1}^{2} \sum_{j=3}^{4} \frac{-1}{4R_{ij}} + \frac{C_{\mathrm{A}}^{2}}{2R_{ij}}(1 + \xi R_{ij}) \exp(-2\xi R_{ij}) \qquad (44e)$$

$$V_{\mathrm{XX}}^{(\mathrm{e,A+})} = \sum_{i=1}^{2} \sum_{j=3}^{4} \frac{-1}{4R_{ij}} + \frac{C_{\mathrm{B}}^{2}}{2R_{ij}}(1 + \xi R_{ij}) \exp(-2\xi R_{ij}) \qquad (44f)$$

The correct equations, above, were used in all the calculations presented in the article.