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Citation for Chemical Breakthrough

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Stepwise Synthesis of Oligodeoxyribonucleotides on an Insoluble Polymer Support[1,2]

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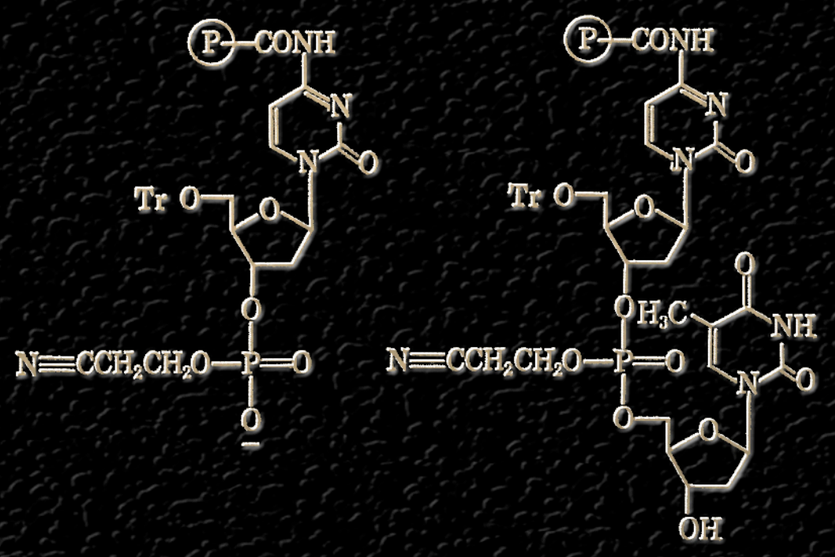
Some time ago it occurred to us that the labor involved in repetitive step syntheses of this type might be materially reduced if the syntheses were carried out on an insoluble polymer support. In the initial step a nucleoside would be joined covalently to the support. Nucleotide units would subsequently be added stepwise to this nucleoside, and in the final reaction the covalent bond joining the oligonucleotide chain to the support would be broken and the oligonucleotide eluted. This technique would enable one to separate the products in the building stages from the solvents, excess reagents, and soluble by-products simply by filtration, thus avoiding numerous time-consuming isolation steps.



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