

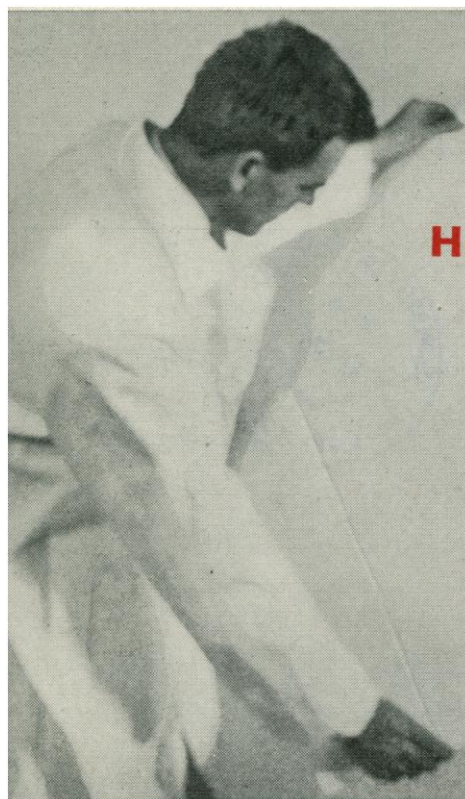
SCIENCE

28 December 1956

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CHEMICALS FOR CREATIVE SYNTHESIS...

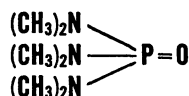


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Here are some typical examples of compounds that can be vital links in a new synthesis. Some are useful because of interesting physical properties. Others are valuable "building blocks" because of highly reactive groupings.

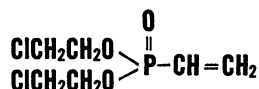
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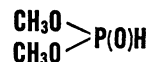
Bis(beta-CHLOROETHYL) VINYLPHOSPHONATE



Water-white liquid, mild, pleasant odor. B. p. 132° C. at 1 mm. Sp. gr. 1.318 at 25/25° C. Sl. sol. in water; sol. in most organic solvents.

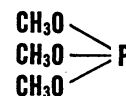
A REMARKABLE NEW MONOMER ... that can be dehydrohalogenated to form mono- or divinyl esters which mass-polymerize to gels. Copolymerizes readily with vinyl acetate and acrylonitrile; self-polymerizes by heat, light, mineral acids, or peroxide catalysts. With basic catalysts, forms addition products with alcohols, mercaptans. Bromine reacts slowly. Reacts with PCl_5 to give $\text{CH}_2=\text{CHP}(\text{O})\text{Cl}_2$.

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Water-white liquid; sharp-sweet odor. B. p. 71° C. at 25 mm. Sp. gr. 25/25° C. 1.200. Sol. in water and common solvents except aliphatics. Hydrolyzes. Sodium salt reacts with alkyl and acyl halides. Forms addition compounds by linking to carbonyl and olefinic double bonds. Reacts with chlorine to form chlorophosphate.

TRIMETHYL PHOSPHITE



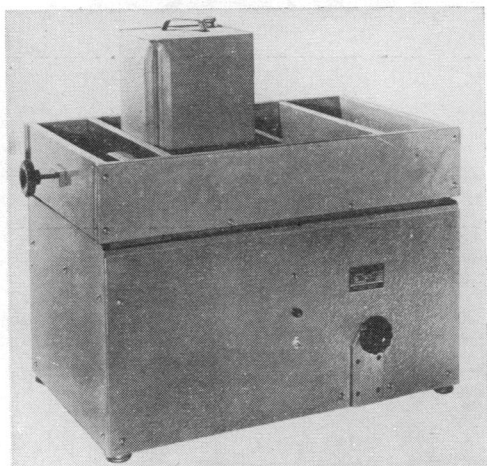
Water-white liquid. Pungent odor. Boils at 111° C. Sol. in most organic solvents. Insol. in water—hydrolyzes slowly. Sp. gr. 1.046. Readily hydrolyzed by acids, reacts with alkyl and acyl halides. Can act as alkylating agent. Reacts with SO_3 , PCl_5 , RCOCl , R_2NCOCl , benzoic acid, MeSO_3H .

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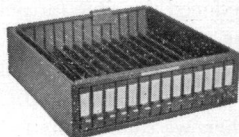
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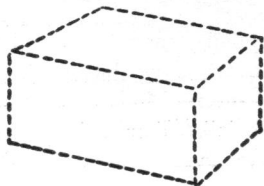
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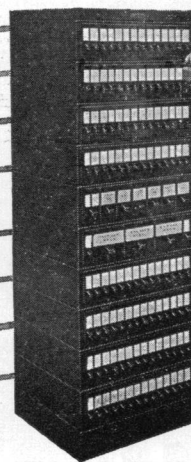
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