LETTERS
TO THE EDITOR

Linear Oligoalkylene(arylene) Phosphoramidites. Rhodium(I) Complexes

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Condensing phosphorylation of bifunctional hydroxyl-containing compounds HOR'OH (R' = alkylene, arylene) with phosphorous triamides P(NR₂)₃ can develop by two main pathways: formation of oligomeric compounds with a linear (**A**) and cross-linked (**B**) structure:

Individual linear oligomers **A** have not been obtained up to now. The rigid conditions for condensation commonly lead to partial cross-linking to form compounds like **B** [1].

We found mild conditions for the condensing phosphorylation leading to exclusive formation of linear oligomers **A** in 12–15 h: 20–45°C, 250 mm Hg, equimolar reagent ratio, polar solvent. The proposed approach allows both organosoluble and insoluble forms of oligomer **A** [R = Me, Et; R' = 1,6-

dioxohexane, 1,10-dioxodecane, 4,4'-dioxobiphenyl, 2,2-bis(4'-oxophenyl)propane] with the maximum molecular weight of up to 1700–2500 Da. The organosoluble forms are colorless transparent elastic substances. We showed that linear oligomer **A** undergoes thermooxidative destruction at 250–300°C. This characteristic of these new materials is useful for their application in various technological processes requiring polymers with a high thermal stability. Oligo compound **A** can substitute ligands in rhodium(I) acetylacetonatodicarbonyl. Excess organophosphorus oligomer does not affect the degree of ligand exchange in acacRh(CO)₂ and leads to formation of a system like acacRh(CO)L–*n*L. This metal complex system contains an extra number of buffer P(III) atoms holds promise for use in catalytic reactions of carbon monoxide [2].

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