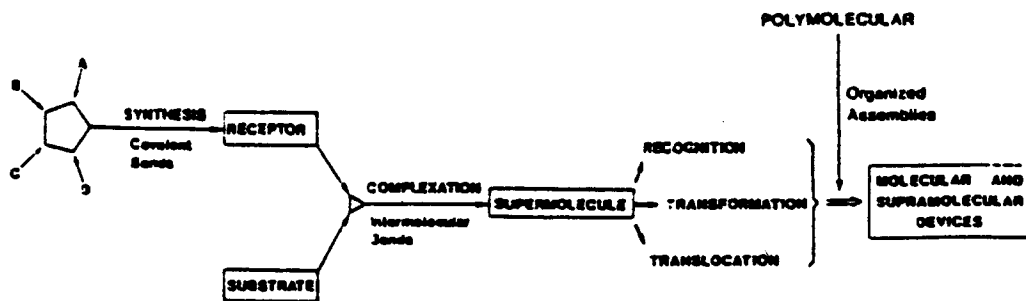


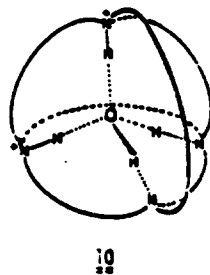
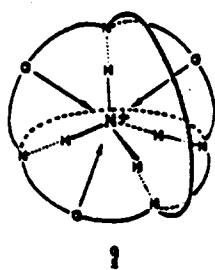
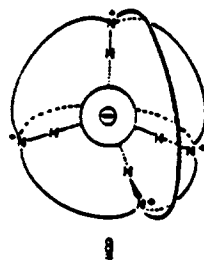
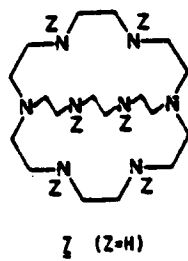
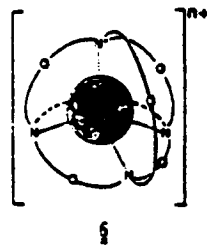
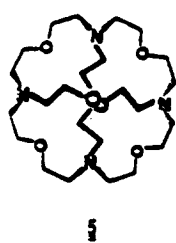
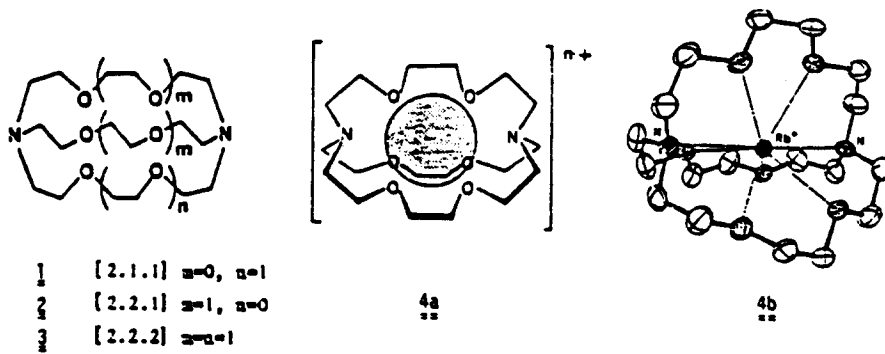
CHEMISTRY

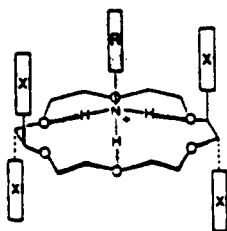
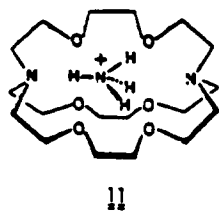
MOLECULAR

SUPRAMOLECULAR



Scheme 1. From molecular to supramolecular chemistry; molecules, supermolecules, molecular and supramolecular devices.





- $\text{X}=\text{H}$
 $\text{X}=\text{CO}_2^-$
 $\text{X}=\text{CONYY}'$

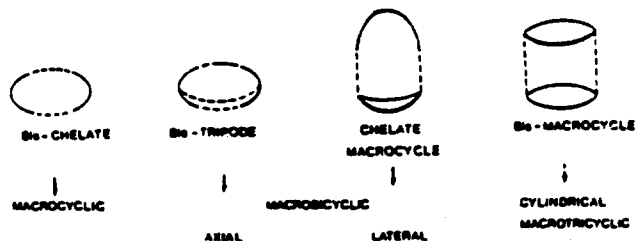
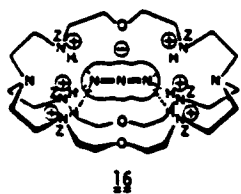
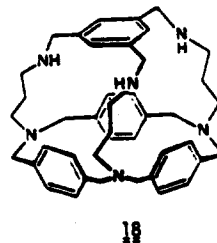
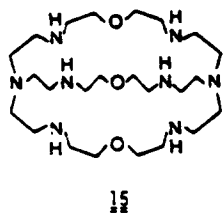
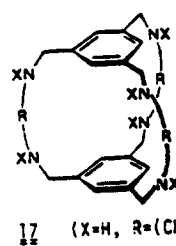
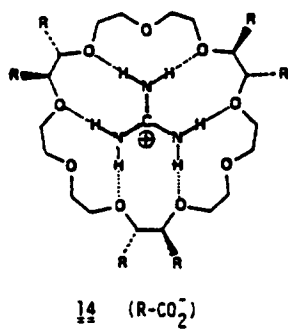
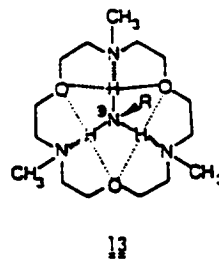
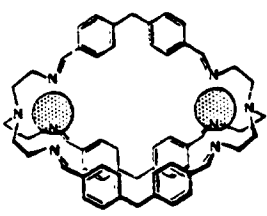
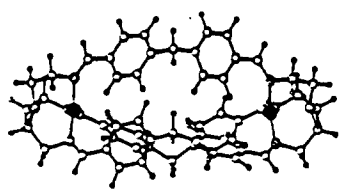


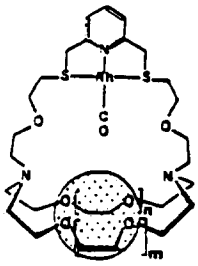
Fig. 2. Combination of chelating, tripodal and cyclic subunits into di-basic co-receptors of macrocyclic, axial and lateral macrobicyclic and cylindrical macrotricyclic types (from left to right).



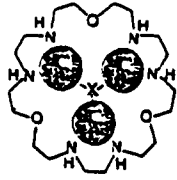
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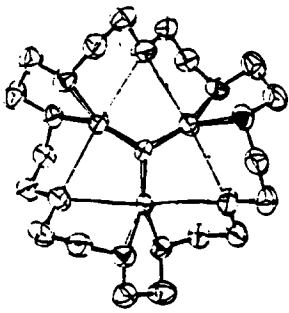
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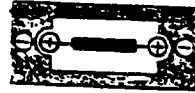
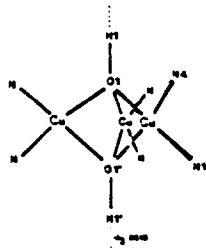
21 (m,n=0,1)



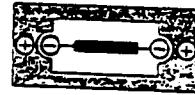
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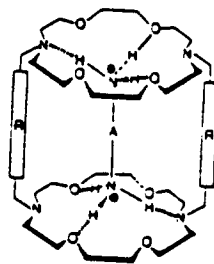
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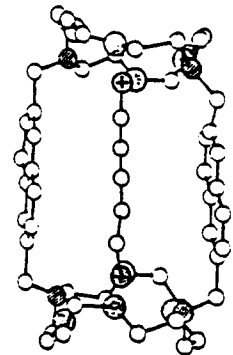
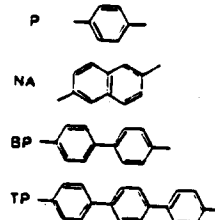
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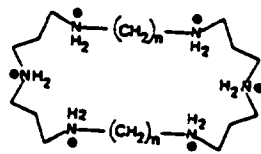
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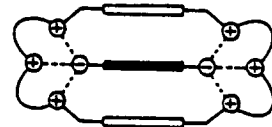
26 (R=P,NA,BP,TP)



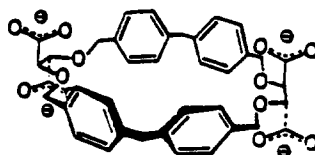
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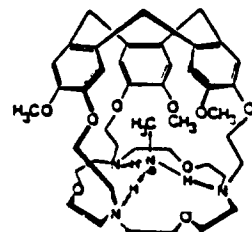
28 (n=7,10)



29



30



31

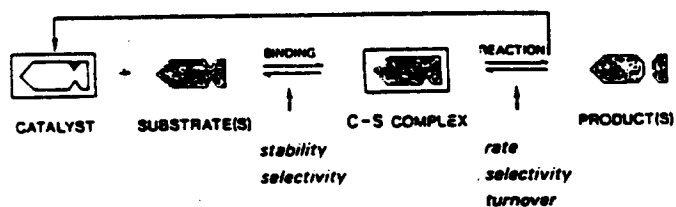
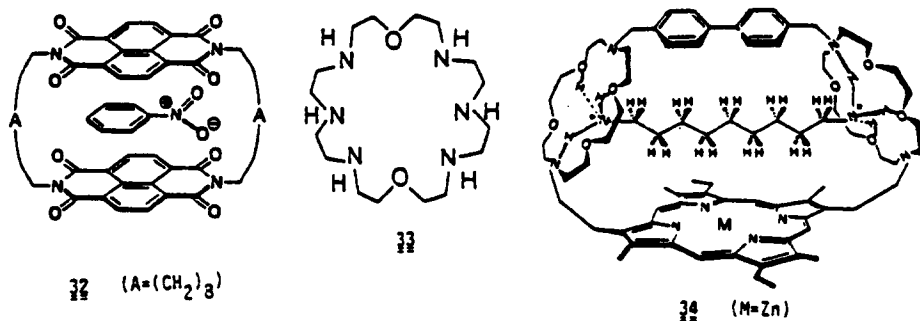


Fig. 3. Schematic representation of the supramolecular catalysis process.

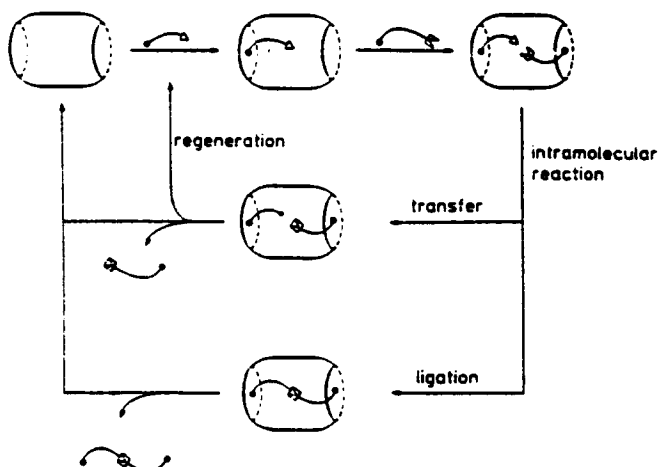
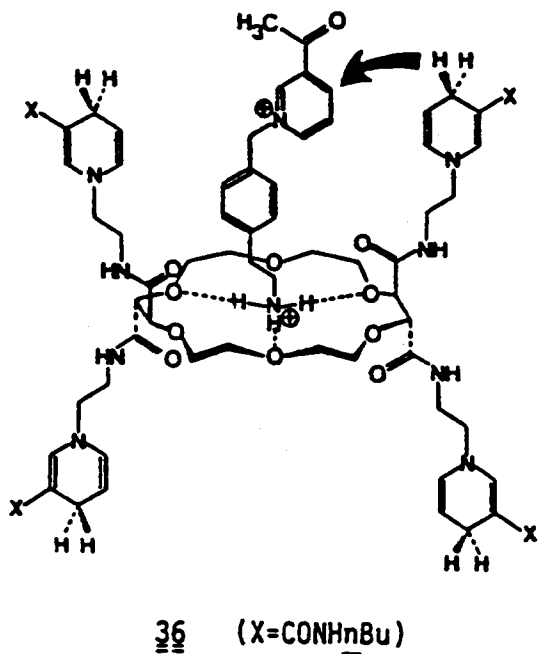
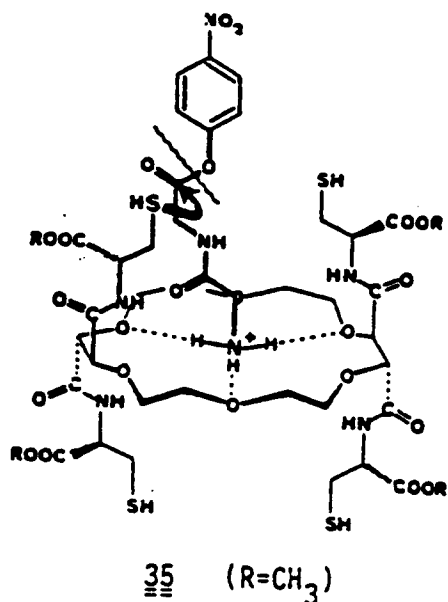


Fig. 4. Schematic illustration of cocatalysis processes: group transfer and ligation reactions occurring within the supramolecular complex formed by the binding of substrates to the two macrocyclic subunits of a macrocyclic co-receptor molecule.

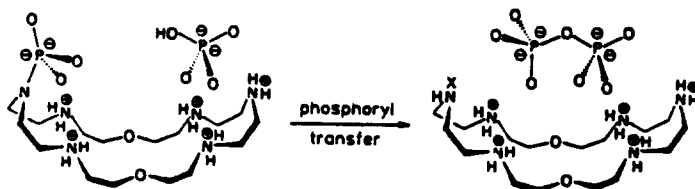


Fig. 5. Cocatalysis: pyrophosphate synthesis by phosphoryl transfer mediated by macrocycle 33 via the phosphorylated intermediate 38.

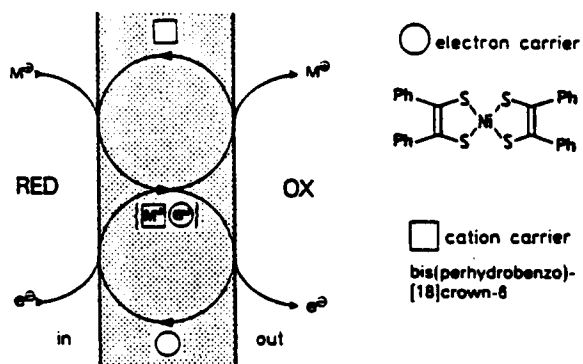


Fig. 7. Electron-cation coupled transport: a redox-driven electron-cation symport consisting of an electron carrier (nickel complex) and a selective cation carrier (macrocyclic polyether). RED, potassium dithionite; OX, $\text{Na}_2[\text{Fe}(\text{CN})_6]$ [133].

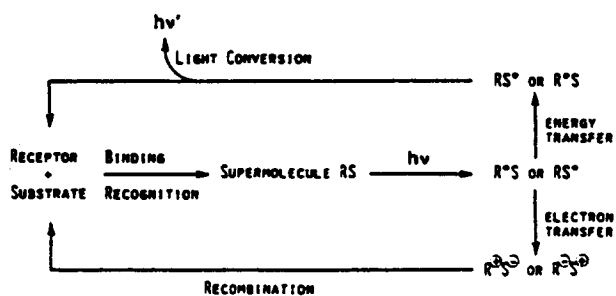
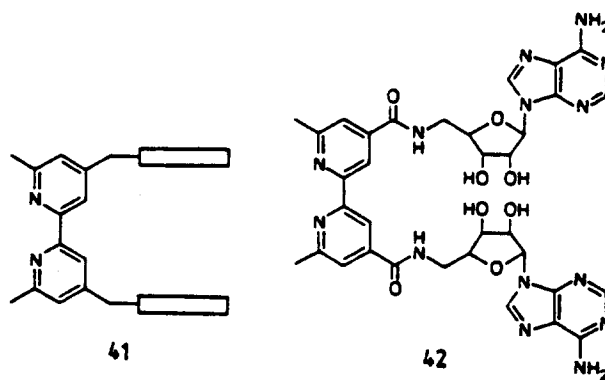
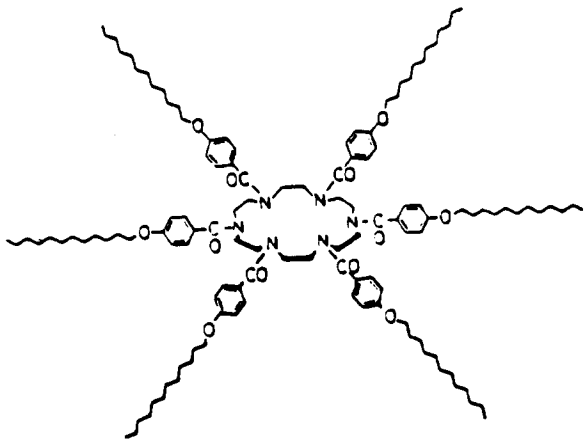
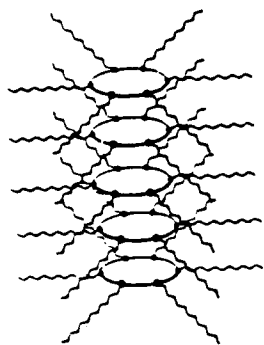


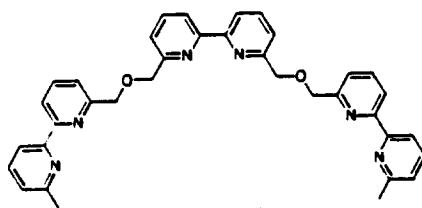
Fig. 10. Representation of the processes involved in supramolecular photochemistry. Generation of R°S , RS° , $\text{R}^\circ\text{S}^\circ$, or $\text{R}^\circ\text{S}^\circ$ may be followed by a chemical reaction.



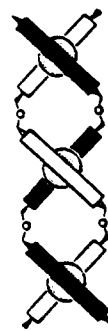
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