(*1*)	X = 4-F	(*9*)	X = 4-F
(*2*)	3-Cl	(*10*)	3-Cl
(*3*)	4-Cl	(*11*)	4-Cl
(*4*)	3-Me	(*12*)	3-Me
(*5*)	4-$NHCOCH_3$	(*13*)	4-$NHCOCH_3$
(*6*)	4-*iso*C_3H_7	(*14*)	4-*iso*C_3H_7
(*7*)	4-CN	(*15*)	3-OCH_3
(*8*)	3-NO_2		

obtained for the oxidation of dialkylarylamines with rat liver microsomal P-450 dependent detoxifying system.

Hydrophobic Host–Guest Interactions in Aqueous Media

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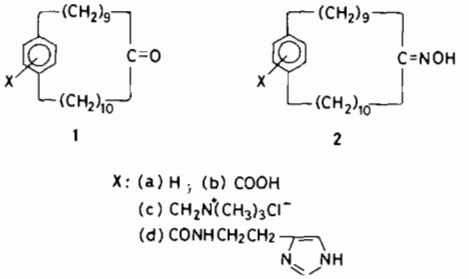
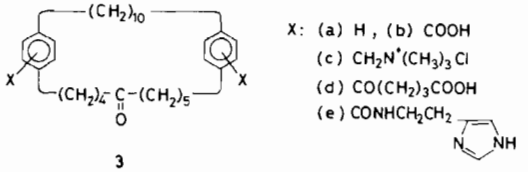
Three fundamental structures can be conceived for designing hydrophobic macrocycles as host molecules which interact with various hydrophobic guest molecules in aqueous media: (a) macrocycles without capping at both top and bottom, (b) macrocycles with a flexible or fixed cap at one end, and (c) macrocycles with a fixed cap at one end and a flexible cap at the other. The author and his coworkers have been mostly concerned with macrocyclic hosts of type (a) structural mode, and prepared various paracyclophanes illustrated by 1, 2, and 3 as typical examples. [*20*] Paracyclophanes provide a hydrophobic binding site much more effective than cyclodextrins for hydrophobic substrates (binding constant $K_b = 10^3$–10^5), and exercise the following catalytic functions in the deacylation of hydrophobic carboxylic esters: nucleophilic-electrostatic [1], nucleophilic-hydrophobic [2], and coordination-nucleophilic [3]. A [*20*] paracyclophane having an ammonium group (1c) provides electrostatic-hydrophobic double-field and a hydrophobic ester undergoes effective aminolysis by glycine [4]. A [*10.10*] paracyclophane bearing two imidazole groups (3e) shows complete turnover behavior in the hydrolysis of hydrophobic esters upon addition of copper(II) ion to the system; the catalysis proceeds through acylation and subsequent deacylation of the cyclophane. [*10.10*] Paracyclophanes exercise two substrate-binding modes depending on the nature of substrates;



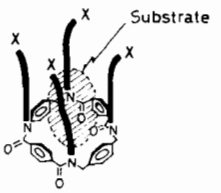
1 2

X: (a) H ; (b) COOH
(c) $CH_2N^{\oplus}(CH_3)_3Cl^{-}$
(d) $CONHCH_2CH_2$–Im



X: (a) H , (b) COOH
(c) $CH_2N^{\oplus}(CH_3)_3Cl$
(d) $CO(CH_2)_3COOH$
(e) $CONHCH_2CH_2$–Im

3



4

penetration and face-to-face [5]. Azaparacyclophanes bearing multiple alkyl chains (octopus-cyclophanes) incorporate various substrates by the hydrophobic-electrostatic interaction of induced-fit type (4) [6].

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The Bis (salicylaldehyde) ethylenediiminecobalt (II) Catalysed Oxidation of Aromatic Amines with Oxygen

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The catalysis of complexed ions in the oxidation of aromatic amines with oxygen could minic biological detoxification reactions.