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COMPLEXATION AND IONOPHORIC PROPERTIES OF 2,4,6-TRIS[(2-DIPHEHYLPHOSPHORYL)-4-ETHYLPHENOXY]-1,3,5-TRIAZINE WITH ALKALY METAL CATIONS

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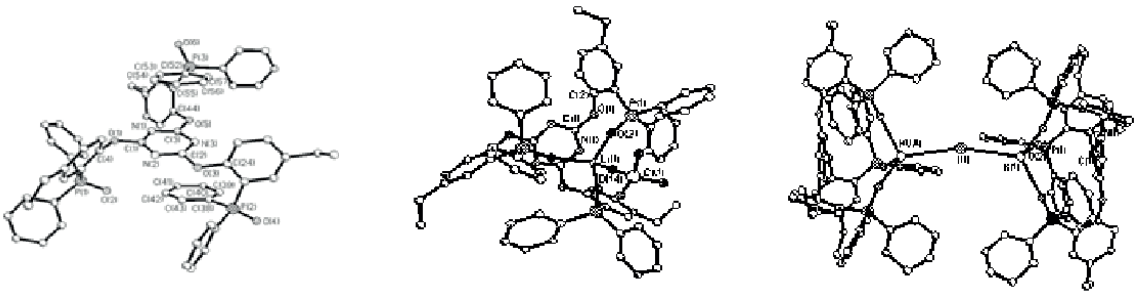
New ligand – 2,4,6-tris[(2-diphehylphosphoryl)-4-ethylphenoxy]-1,3,5-triazine (L) was synthesized. Crystal structures L•H_2O (I), [LiL(ClO_4)…(H_2O)LLi](ClO_4)•11H_2O (II), [LiLI…(H_2O)LLi]I•18H_2O (III), and [K_2L_2I]I•7.2H_2O (IV) were determined by X-ray diffraction.



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Stability constants of complexes of L with lithium and sodium cations in MeCN were determined by spectrophotometric titration.

reaction	log *K*	*ε (λ, nm)*, cm^{-1} M^{-1}	*HRF, %*	R_{det}^2
$Li^+ + L = Li^+L$	6.23 ± 0.04	15877 ± 84 (249)	0.522	0.9998
$Na^+ + L = Na^+L$	4.90 ± 0.09	3222 ± 178 (285)	0.375	0.9999

Ionophoric properties of L were studied. It was determined that L as the active component of the polymeric plasticized membrane of ISE, exhibits selectivity towards lithium cation and shows good lithium/sodium selectivity. The results of study of ionophoric properties are in good agreement with spectrophotometric studies.

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