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New Perfluoroalkylated Phosphorus Amphiphiles

A. Brun^a; D. Albouy^a; G. Etemad-moghadam^a; I. Rico-lattes^a; A. Lattes^a

^a Laboratoire des IMRCP (UMR 5623) Université Paul Sabatier, Toulouse cedex 4, FRANCE

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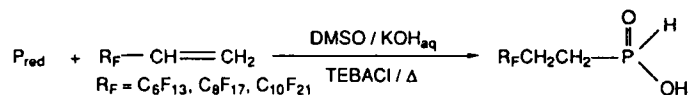
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New Perfluoroalkylated Phosphorus Amphiphiles

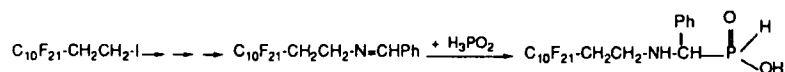
A. BRUN, D. ALBOUY, G. ETEMAD-MOGHADAM*,
 I. RICO-LATTES and A. LATTES

*Laboratoire des IMRCP (UMR 5623) Université Paul Sabatier – 118, route de
 Narbonne, 31062 Toulouse cedex 4 -FRANCE.*

Phospholipids are the main components of biological membranes and they spontaneously tend to self-assembly into liposomes. Synthetic double-chain so as bola-amphiphiles allow the preparation of vesicles and can be used as models of natural membranes and for preparing drug delivery systems. The formation of vesicles from single-chain perfluoro-alkylated phosphate or phosphoramidate amphiphiles was recently reported.¹ We present the synthesis of new perfluoroalkylated phosphinic acid amphiphiles bearing a P-C bond and an ionic polar head promoting self-organisation. We have already described the synthesis of the phosphine derivatives by one-pot reaction from red phosphorus via the *in situ* generation of PH₃ and terminal alkenes and alkynes in basic media under sonication.² We extend this reaction to perfluoroalkenes under phase transfer catalysis.



The synthesis of α -aminoperfluoroalkyl analogues can be realized by four steps reaction from the corresponding perfluoroalkyl iodide and hypophosphorous acid under heating.



References

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* Tel : 05 61 55 83 33 – E-mail : etemad@ramses.ups-tlse.fr