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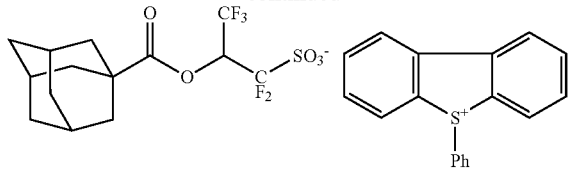

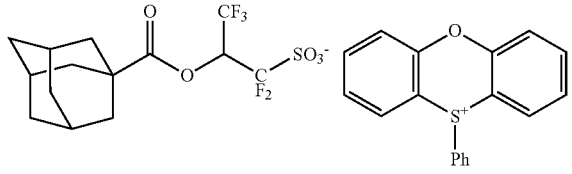

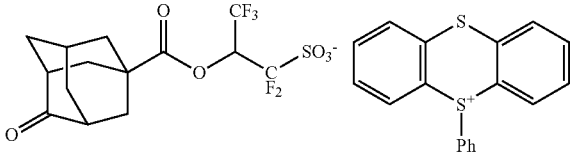

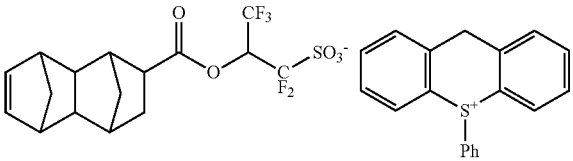

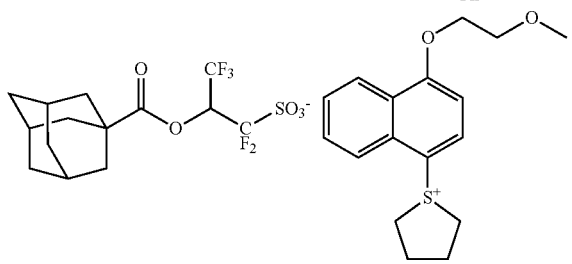

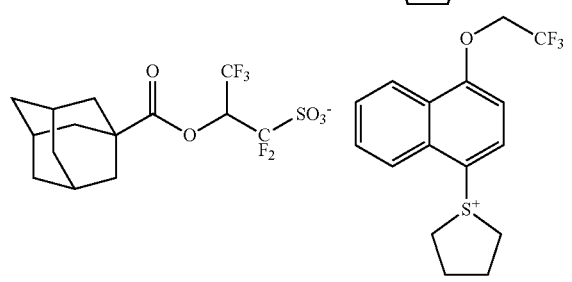

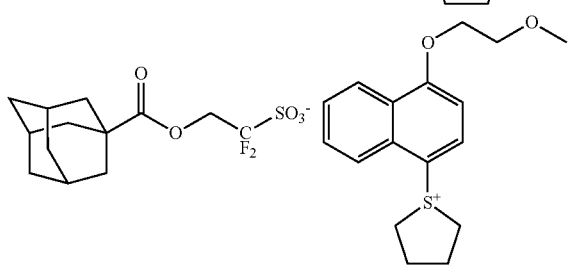

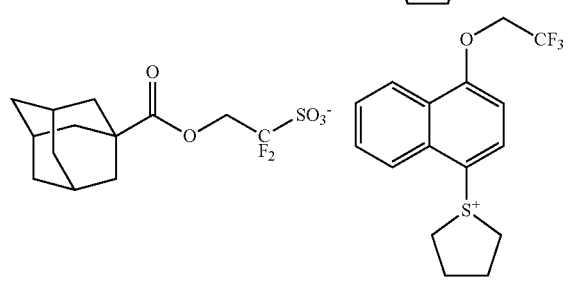

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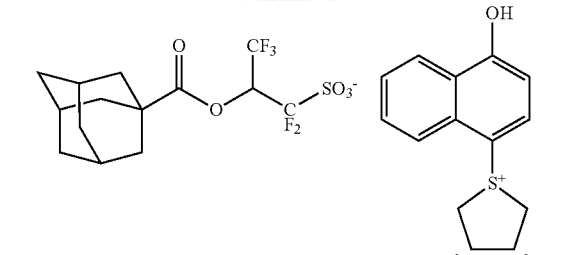

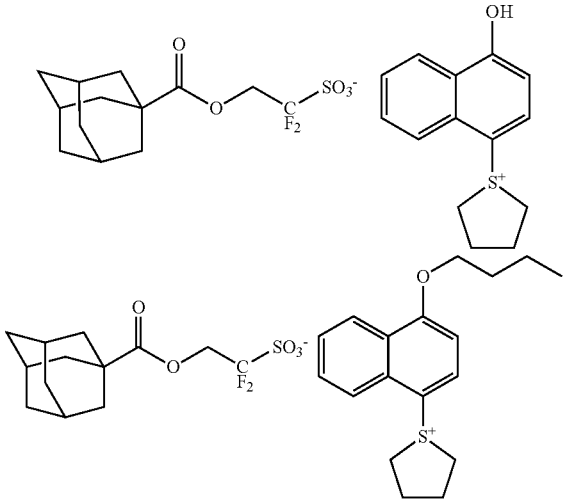

In formula (1B), R^{fb1} and R^{fb2} are each independently fluorine or a straight, branched or cyclic C_1-C_{40} monovalent hydrocarbon group which may contain a heteroatom. Illustrative examples of the monovalent hydrocarbon group are as exemplified for R^{105}. Preferably R^{fb1} and R^{fb2} are fluorine or C_1-C_4 straight fluorinated alkyl groups. Also, R^{fb1} and R^{fb2} may bond together to form a ring with the linkage: —CF_2—SO_2—N^-—SO_2—CF_2— to which they are attached. It is preferred to form a ring structure via a fluorinated ethylene or fluorinated propylene group.

In formula (1C), R^{fc1}, R^{fc2} and R^{fc3} are each independently fluorine or a straight, branched or cyclic C_1-C_{40} monovalent hydrocarbon group which may contain a heteroatom. Illustrative examples of the monovalent hydrocarbon group are as exemplified for R^{105}. Preferably R^{fc1}, R^{fc2} and R^{fc3} are fluorine or C_1-C_4 straight fluorinated alkyl groups. Also, R^{fc1} and R^{fc2} may bond together to form a ring with the linkage: —CF_2—SO_2—C^-—SO_2—CF_2— to which they are attached. It is preferred to form a ring structure via a fluorinated ethylene or fluorinated propylene group.

In formula (1D), R^{fd} is a straight, branched or cyclic C_1-C_{40} monovalent hydrocarbon group which may contain a heteroatom. Illustrative examples of the monovalent hydrocarbon group are as exemplified for R^{105}.

With respect to the synthesis of the sulfonium salt having an anion of formula (1D), reference may be made to JP-A 2010-215608 and JP-A 2014-133723.