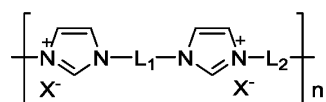


Claims

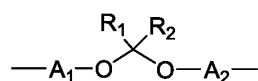
1. A polymer having the following Formula (I):



Formula (I)

wherein

L₁ has the following structure:



wherein R₁ and R₂ are, in each instance, same or different, and are independently selected from the group consisting of hydrogen, optionally substituted alkyl, and optionally substituted alkoxy;

A₁ and A₂, are in each instance, same or different, and are optionally substituted aryl;

L₂ is, in each instance, selected from the group consisting of optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, and optionally substituted aryl;

X, in each instance, is same or different, and is a halogen;

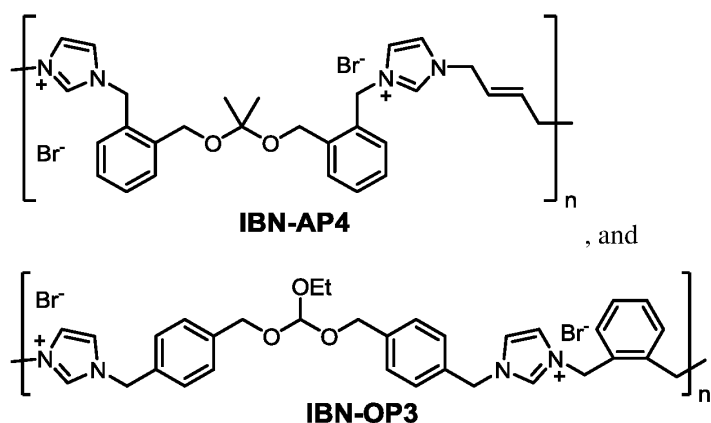
n is an integer of at least 1;

or a salt or hydrate thereof.

2. The polymer according to claim 1, wherein at least one of R₁ and R₂ is selected from C₁-C₈ alkoxy group.
3. The polymer according to claim 2, wherein R₁ and R₂ are same or different, and are independently selected from hydrogen and ethoxy.
4. The polymer according to claim 1, wherein R₁ and R₂ are, in each instance, same or different, and are independently selected from C₁-C₈ alkyl.
5. The polymer according to claim 4, wherein R₁ and R₂ are methyl.

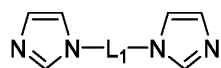
6. The polymer according to any one of the preceding claims, wherein A_1 and A_2 , are same or different, and are an aryl group derived from alkylbenzene.
7. The polymer according to any one of the preceding claims, wherein A_1 and A_2 , are same or different, and are xylylene.
8. The polymer according to claim 7, wherein said xylylene is ortho-xylylene or para-xylylene.
9. The polymer according to any one of the preceding claims, wherein R_1 , R_2 , A_1 , and A_2 are provided in one of the following combinations:

 R_1 and R_2 are methyl; and A_1 and A_2 are para-xylylene;
 R_1 and R_2 are methyl, and A_1 and A_2 are ortho-xylylene;
 R_1 is H, R_2 is ethoxy; and A_1 and A_2 are para-xylylene; and
 R_1 is H, R_2 is ethoxy; and A_1 and A_2 are ortho-xylylene.
10. The polymer according to any one of the preceding claims, wherein L_2 is selected from the group consisting of alkenyl and aryl.
11. The polymer according to any one of the preceding claims, wherein X is selected from the group consisting of chlorine, fluorine, bromine and iodine.
12. The polymer according to any one of the preceding claims, wherein n is an integer from 1 to 100, 1 to 50, 1 to 30, 1 to 15, 3 to 15, or 7.
13. The polymer according to any one of the preceding claims, wherein the polymer is selected from the group consisting of:



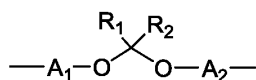
14. A method for preparing a polymer according to any one of claims 1 to 13, comprising the step of:

contacting a di-imidazole having the following Formula (II):



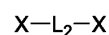
Formula (II)

wherein L_1 has the following structure:



wherein R_1 and R_2 are, in each instance, same or different, and are independently selected from the group consisting of hydrogen, optionally substituted alkyl, and optionally substituted alkoxy; and A_1 and A_2 , are in each instance, same or different, and are optionally substituted aryl;

with a dihalide having the following Formula (III):



Formula (III)

wherein L_2 is, in each instance, selected from the group consisting of optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, and optionally substituted aryl; and X , in each instance, is same or different, and is a halogen.

15. An antimicrobial composition comprising a polymer according to any one of claims 1 to 13, or a salt or hydrate thereof.

16. A method for killing or inhibiting the growth of a microorganism, the method comprising contacting said microorganism *ex vivo* with an antimicrobial composition according to claim 15.
17. Non-therapeutic use of an antimicrobial composition according to claim 15, for killing or inhibiting the growth of a microorganism *ex vivo*.
18. An antimicrobial composition according to claim 15, for use as an antibiotic.
19. A method for treating a microbial infection, the method comprising administering to a subject an antimicrobial composition according to claim 15.
20. Use of an antimicrobial composition according to claim 15, in the manufacture of a medicament for treating a microbial infection.
21. The method according to claim 19, or use according to claim 20, wherein the microbial infection is caused by one or more microorganism.
22. The method according to claim 16, use according to claim 17, or the method or use according to claim 21, wherein the microorganism is a bacterium, fungus, or a mixture thereof.