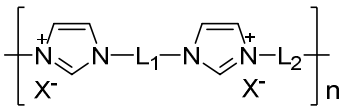
Claims

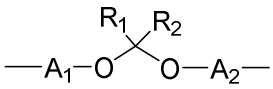
1. An oligomer or polymer having the following Formula (I):



Formula (I)

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;

A_1 and A_2, are in each instance, same or different, and are optionally substituted aryl or xylylenediyl;

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;

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

n is an integer of at least 2;

or a salt or hydrate thereof.

2. The oligomer or polymer according to claim 1, wherein at least one of R_1 and R_2 is selected from C_1-C_8 alkoxy group.

3. The oligomer or polymer according to claim 2, wherein R_1 and R_2 are same or different, and are independently selected from hydrogen and ethoxy.

4. The oligomer or polymer according to claim 1, wherein R_1 and R_2 are, in each instance, same or different, and are independently selected from C_1-C_8 alkyl.

5. The oligomer or polymer according to claim 4, wherein R_1 and R_2 are methyl.

6. The oligomer or 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 or a xylylenediyl group.

7. The oligomer or polymer according to any one of the preceding claims, wherein A_1 and A_2, are same or different, and are xylylenediyl.

8. The oligomer or polymer according to claim 7, wherein said xylylenediyl is ortho-xylylenediyl or para-xylylenediyl.

9. The oligomer or 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:

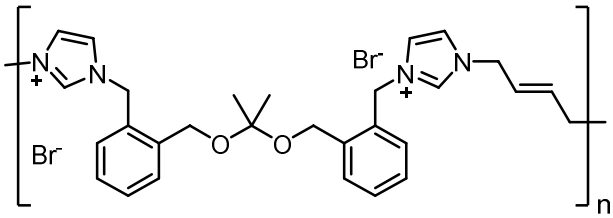
   R_1 and R_2 are methyl; and A_1 and A_2 are para-xylylenediyl;
   R_1 and R_2 are methyl, and A_1 and A_2 are ortho-xylylenediyl;
   R_1 is H, R_2 is ethoxy; and A_1 and A_2 are para-xylylenediyl; and
   R_1 is H, R_2 is ethoxy; and A_1 and A_2 are ortho-xylylenediyl.

10. The oligomer or polymer according to any one of the preceding claims, wherein L_2 is selected from the group consisting of alkenyl and aryl.

11. The oligomer or 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 oligomer or 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 to15, or 7.

13. The oligomer or polymer according to any one of the preceding claims, wherein the polymer is selected from the group consisting of:



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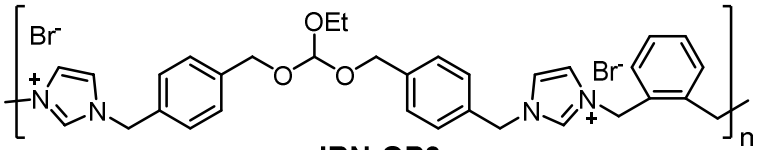
, and



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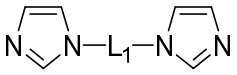
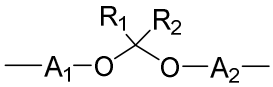
14. A method for preparing an oligomer or polymer according to any one of claims 1 to 13, comprising the step of:

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



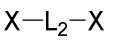
Formula (II)

wherein L_1 has the following structure:



wherein 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; and A1 and A_2, are in each instance, same or different, and are optionally substituted aryl or xylylenediyl;

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 an oligomer or 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. Use of an antimicrobial composition according to claim 15, in the manufacture of a medicament for treating a microbial infection.

20. The use according to claim 19, wherein the microbial infection is caused by one or more microorganism.

21. The method according to claim 16, use according to claim 17, or use according to claim 20, wherein the microorganism is a bacterium, fungus, or a mixture thereof.