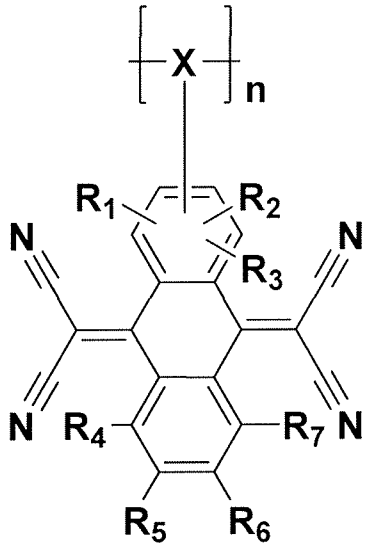
Claims

1. Tetracyanoanthraquinodimethane polymers consisting of an oligomeric or polymeric compound of the general formula I



(I)

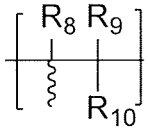
where

R_1 to R_7: are each independently hydrogen atoms, alkyl groups, alkenyl groups, alkynyl groups, alkoxy groups, alkylthio groups, haloalkyl groups, haloalkoxy groups, cycloalkyl groups, cycloalkoxy groups, aryl groups, heteroaryl groups, aryloxy groups, aralkyl groups, carboxylic acid groups, sulphonic acid groups, amino groups, monoalkylamino groups, dialkylamino groups, nitro groups, cyano groups, hydroxyl groups, alkylcarbonyl groups, alkenylcarbonyl groups, alkynylcarbonyl groups, carboxylic ester groups, carboxamide groups, sulphonic ester groups, thiol groups, halogen atoms or a combination of these groups or atoms,

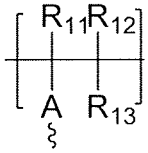
X: is an organic group which is formed by polymerization reaction from a group consisting of an organic double bond, an organic triple bond, an oxirane or an aziridine, or is an organic group which is formed by a polymer-analogous reaction,

n: is an integer greater than or equal to 2.

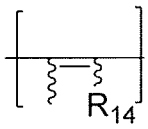
2. Tetracyanoanthraquinodimethane polymers according to Claim 1, wherein X is an organic group of one of the general formulae II-XIV:



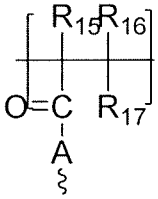
(II)



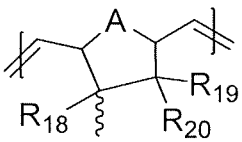
(III)



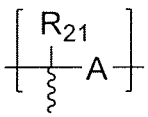
(IV)



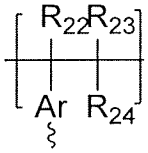
(V)



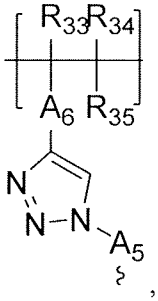
(VI)



(VII)



(VIII)



(XIV)

where

R_8 to R_{24}: are each independently hydrogen atoms, alkyl groups, alkenyl groups, alkynyl groups, alkoxy groups, alkylthio groups, haloalkyl groups, haloalkoxy groups, cycloalkyl groups, cycloalkoxy groups, aryl groups, heteroaryl groups, aryloxy groups, aralkyl groups, carboxylic acid groups, sulphonic acid groups, amino groups, monoalkylamino groups, dialkylamino groups, nitro groups, cyano groups, hydroxyl groups, alkylcarbonyl groups, alkenylcarbonyl groups, alkynylcarbonyl groups, carboxylic ester groups, carboxamide groups, sulphonic ester groups, thiol groups, halogen atoms or a combination of these groups or atoms,

R_{26} to R_{28}: are each independently hydrogen atoms, alkyl groups, alkenyl groups, alkynyl groups, alkoxy groups, alkylthio groups, haloalkyl groups, haloalkoxy groups, cycloalkyl groups, cycloalkoxy groups, aryl groups, heteroaryl groups, aryloxy groups, aralkyl groups, carboxylic acid groups, sulphonic acid groups, amino groups, monoalkylamino groups, dialkylamino groups, nitro groups, cyano groups, hydroxyl groups, alkylcarbonyl groups, alkenylcarbonyl groups, alkynylcarbonyl groups, carboxylic ester groups, carboxamide groups, sulphonic ester groups, thiol groups, halogen atoms or a combination of these groups or atoms,

R_{30} to R_{32}: are each independently hydrogen atoms, alkyl groups, alkenyl groups, alkynyl groups, alkoxy groups, alkylthio groups, haloalkyl groups, haloalkoxy groups, cycloalkyl groups, cycloalkoxy groups, aryl groups, heteroaryl groups, aryloxy groups, aralkyl groups, carboxylic acid groups, sulphonic acid groups, amino groups, monoalkylamino groups, dialkylamino groups, nitro groups, cyano groups, alkylcarbonyl groups, alkenylcarbonyl groups, alkynylcarbonyl groups, carboxylic ester groups, carboxamide groups, sulphonic ester groups, halogen atoms or a combination of these groups or atoms,

R_{33} to R_{35}: are each independently hydrogen atoms, alkyl groups, alkenyl groups, alkoxy groups, alkylthio groups, haloalkyl groups, haloalkoxy groups, cycloalkyl groups, cycloalkoxy groups, aryl groups, heteroaryl groups, aryloxy groups, aralkyl groups, carboxylic acid groups, sulphonic acid groups, amino groups, monoalkylamino groups, dialkylamino groups, nitro groups, cyano

groups, hydroxyl groups, alkylcarbonyl groups, alkenylcarbonyl groups, alkynylcarbonyl groups, carboxylic ester groups, carboxamide groups, sulphonic ester groups, thiol groups, halogen atoms or a combination of these groups or atoms,

A: is an oxygen atom, a sulphur atom or an -N(R_{29})- group, where R_{29} is preferably a hydrogen atom, alkyl group, alkenyl group, alkynyl group, alkoxy group, alkylthio group, haloalkyl group, haloalkoxy group, cycloalkyl group, cycloalkoxy group, aryl group, heteroaryl group, aryloxy group, aralkyl group, carboxylic acid group, sulphonic acid group, nitro group, alkylcarbonyl group, alkenylcarbonyl group, alkynylcarbonyl group, carboxylic ester group, carboxamide group, sulphonic ester group,

A_1 and A_2: are each independently a covalent bond, an alkyl group, an alkenyl group, an alkynyl group, an alkoxy group, an alkylthio group, a haloalkyl group, a haloalkoxy group, a cycloalkyl group, a cycloalkoxy group, an aryl group, a heteroaryl group, an aryloxy group, an aralkyl group, a monoalkylamino group, a dialkylamino group, an alkylcarbonyl group, an alkenylcarbonyl group, an alkynylcarbonyl group, a carboxylic ester group, a carboxamide group, a sulphonic ester group,

A_3 and A_4: are each independently a covalent bond, an alkyl group, an alkenyl group, an alkynyl group, an alkoxy group, an alkylthio group, a cycloalkyl group, a cycloalkoxy group, an aryl group, a heteroaryl group, an aryloxy group, an aralkyl group, a dialkylamino group, an alkylcarbonyl group, an alkenylcarbonyl group, an alkynylcarbonyl group, a carboxylic ester group, a carboxamide group, a sulphonic ester group,

A_5 and A_6: are each independently a covalent bond, an alkyl group, an alkenyl group, an alkoxy group, an alkylthio group, a haloalkyl group, a

haloalkoxy group, a cycloalkyl group, a cycloalkoxy group, an aryl group, a heteroaryl group, an aryloxy group, an aralkyl group, a monoalkylamino group, a dialkylamino group, an alkylcarbonyl group, an alkenylcarbonyl group, an alkynylcarbonyl group, a carboxylic ester group, a carboxamide group, a sulphonic ester group,

Ar: is an independently substituted cycloalkyl group, cycloalkoxy group, aryl group, heteroaryl group, aryloxy group, aralkyl group.

3. Use of the tetracyanoanthraquinodimethane polymers according to one or both of Claims 1 and 2 as active electrode material for electrical charge storage means.

4. Use of the tetracyanoanthraquinodimethane polymers according to Claim 3, wherein the active electrode material takes the form of a full or partial surface coating of electrode elements for electrical charge storage means.

5. Use of the tetracyanoanthraquinodimethane polymers according to one or both of Claims 1 and 2 as electrode slurry for electrical charge storage means.