[0017] As used herein, the notation C(O) refers to a carbon to oxygen double bond. The term “halo” used herein means a halogen, and includes fluorine, chlorine, bromine, or iodine, bonded as is understood in the art.

[0018] The term “alkyl” used herein refers to saturated aliphatic groups, including straight-chain alkyl groups (e.g., methyl, ethyl, etc.), branched-chain alkyl groups (isopropyl, tert-butyl, etc.), cycloalkyl (alicyclic) groups (cyclopropyl, cyclopentyl, cyclohexyl, cycloheptyl, cyclooctyl), alkyl-substituted cycloalkyl groups, and cycloalkyl substituted alkyl groups. General formula may use the term “C_n-alkyl”, wherein n is an integer from, e.g., 1-20, to indicate a particular alkyl group (straight- or branched-chain) of a particular range or number of carbons in the group. For example, the term C_1-C_3-alkyl includes, but is not limited to, methyl, ethyl, propyl, and isopropyl. Similarly, the term C_{3-6}-cycloalkyl includes, but is not limited to, cyclopropyl, cyclopentyl, and cyclohexyl. Alkyl groups, as well as cycloalkyl groups, may be unsubstituted or substituted. Thus, the term alkyl includes both “unsubstituted alkyl” and “substituted alkyl”, the latter of which refers to moieties having substituents replacing a hydrogen on one or more carbons of the hydrocarbon backbone.

[0019] The term “alkenyl” includes unsaturated aliphatic groups analogous in length and possible substitution to the alkyls described above, but which contain at least one double bond. Alkenyl also include “unsubstituted alkenyls” and “substituted alkenyls,” the latter of which refers to moieties having substituents replacing a hydrogen on one or more carbons of the hydrocarbon backbone.

[0020] For example, the term “alkenyl” includes straight-chain alkenyl groups (e.g., ethenyl, propenyl, butenyl, pentenyl, hexenyl, heptenyl, octenyl, nonenyl, decenyl, etc.), branched-chain alkenyl groups, cycloalkenyl (alicyclic) groups (cyclopropenyl, cyclopentenyl, cyclohexenyl, cycloheptenyl, cyclooctenyl), alkyl or alkenyl substituted cycloalkenyl groups, and cycloalkyl or cycloalkenyl substituted alkenyl groups. The term alkenyl further includes alkenyl groups that include oxygen, nitrogen, sulfur or phosphorous atoms replacing one or more carbons of the hydrocarbon backbone. In certain embodiments, a straight chain or branched chain alkenyl group has 6 or fewer carbon atoms in its backbone (e.g., C_2-C_6 for straight chain, C_3-C_6 for branched chain). Likewise, cycloalkenyl groups may have from 3-8 carbon atoms in their ring structure, and more preferably have 5 or 6 carbons in the ring structure. The term C_2-C_6 includes alkenyl groups containing 2 to 6 carbon atoms.

at least one carbon, hydrogen or heteroatom. The terms include, for example, but are not limited to, "alkylamino," "arylamino," "diarylamino," "alkylarylamino," "alkylaminoaryl," "arylaminoalkyl," "alkaminoalkyl," "amide," "amido," and "aminocarbonyl." The term "alkyl amino" comprises groups and compounds wherein the nitrogen is bound to at least one additional alkyl group. The term "dialkyl amino" includes groups wherein the nitrogen atom is bound to at least two additional alkyl groups. The term "arylamino" and "diarylamino" include groups wherein the nitrogen is bound to at least one or two aryl groups, respectively. The term "alkylarylamino," "alkylaminoaryl" or "arylaminoalkyl" refers to an amino group which is bound to at least one alkyl group and at least one aryl group. The term "alkaminoalkyl" refers to an alkyl, alkenyl, or alkynyl group bound to a nitrogen atom which is also bound to an alkyl group.

[0025] The term "amide," "amido" or "aminocarbonyl" includes compounds or moieties which contain a nitrogen atom which is bound to the carbon of a carbonyl or a thiocarbonyl group. The term includes "alkaminocarbonyl" or "alkylaminocarbonyl" groups which include alkyl, alkenyl, aryl or alkynyl groups bound to an amino group bound to a carbonyl group. It includes arylaminocarbonyl and arylcarbonylamino groups which include aryl or heteroaryl moieties bound to an amino group which is bound to the carbon of a carbonyl or thiocarbonyl group. The terms "alkylaminocarbonyl," "alkenylaminocarbonyl," "alkynylaminocarbonyl," "arylaminocarbonyl," "alkylcarbonylamino," "alkenylcarbonylamino," "alkynylcarbonylamino," and "arylcarbonylamino" are included in term "amide." Amides also include urea groups (aminocarbonylamino) and carbamates (oxycarbonylamino).

[0026] The term "aryl" includes groups, including 5- and 6-membered single-ring aromatic groups, for example, phenyl. Furthermore, the term "aryl" includes multicyclic aryl groups, e.g., tricyclic, bicyclic, e.g., naphthalene, benzoxazole, benzodioxazole, benzothiazole, benzoimidazole, benzothiophene, methylenedioxyphenyl, quinoline, isoquinoline, anthryl, phenanthryl, naphthridine, indole, benzofuran, purine, benzofuran, deazapurine, or indolizine. Aryl groups having heteroatoms in the ring structure may also be referred to as "aryl heterocycles", "heterocycles," "heteroaryls" or "heteroaromatics", for example, pyrrole, furan, thiophene, thiazole, isothiaozole, imidazole, triazole, tetrazole, pyrazole, oxazole, isoxazole, pyridine, pyrazine, pyridazine, and pyrimidine, and the like. The aromatic ring can be substituted at one or more ring positions with such substituents as described above, as for example, alkyl, halogen, hydroxyl, alkoxy, alkylcarbonyloxy, arylcarbonyloxy, alkoxycarbonyloxy,