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(54) Title: NANO SILVER-ZINC OXIDE COMPOSITION

(57) Abstract: A new composite comprises (a) 10.1 -99.9 % by weight of elemental Ag and (b) 0.1 -89.9 % by weight of ZnO, wherein the sum of (a) and (b) makes 90 % or more by weight of the composite and wherein the elemental Ag has a primary particle size of 10-200 nm and/or the ZnO has a primary particle size of 0.1 to below 50µm and/or the composite has a particle size distribution of 0.1 - 50 µm and/or a BET surface area of 10-100 m²/g. The novel composite may be obtained by the steps (i) mixing a first mixture of at least one Ag-salt with a second mixture of at least one Zn-salt thereby forming a third mixture of Ag- and Zn-salts, (ii) adding the third mixture to a mixture of a carbonate source, (iii) co-precipitating of the Ag- and Zn-carbonates formed in step (ii), (iv) washing of the Ag- and Zn-carbonates and (v) thermal decomposing of the Ag- and Zn-carbonates. The novel composites are useful to impart antimicrobial properties to surfaces, articles or bulk compositions, especially to membrane systems for gas- or water separation.

