In a first aspect, ~~The~~ the present ~~invention~~ disclosure relates to an aqueous formulation particularly for generating electrically conductive and/or reflective structures by microcontact printing, characterized in that the formulation contains at least

a) ≥ 15 to ≤ 55 parts by weight water,

b) ≥ 10 to ≤ 50 parts by weight alcohol,

c) ≥ 15 to ≤ 45 parts by weight metal-based nanoparticles,

d) ≥ 0,5 to ≤ 10 parts by weight non-fluorinated surfactant, and

e) ≥ 0,5 to ≤ 10 parts by weight fluorinated surfactant,

wherein the above defined constituents a) to e) summarize to a concentration of ≤ 100 parts by weight in the formulation.

In a second aspect, the present disclosure relates to a method of generating structures, particularly being electrically conductive and/or reflective, on a substrate by microcontact printing, characterized by the steps of

A) Providing a stamp;

B) Applying a formulation as defined above to at least a part of the surface of the stamp;

C) Transferring the formulation from the stamp to the substrate; and

D) Optionally treating the formulation transferred to the substrate with heat.

In a third aspect, the present disclosure relates to a substrate comprising a structure being particularly electrically conductive and/or reflective and being obtainable by a formulation as defined above by microcontact printing.

The term "metal-based" nanoparticles in the sense of the present invention shall particularly mean any nanoparticles which comprise a metal as such or a compound being at least partly formed from a metal compound, such as an alloy, metal oxides or the like. As an example for metal oxides, titanium oxide (TiO_2) or indium tin oxide (ITO) may be referred to in an exemplary manner only. Consequently, at any passage metal-based nanoparticles are cited, these particles may be metals, alloys, or metal compounds such as metal oxides. Apart from that, the term "nanoparticles" in the sense of the present invention may exemplarily mean particles having a maximum diameter in a range of ≤ 250 nm, for example lying in the range of ≥ 1 nm to ≤ 250 nm.

The term "structure" in the sense of the present invention shall particularly mean any kind of material being applied to the surface of a substrate. In detail, the term structure comprises a layer

being applied to a whole or an expanded region of a surface area, such as a large region coating, or a defined pattern being applied just to defined regions onto the surface of the substrate.

The term "microcontact printing" according to the present invention shall particularly mean a process being generally known in the art. This process comprises the steps of applying a formulation, or an ink, respectively, onto a surface or at least onto a part of the latter of a stamp, which may be structured or not. The ink being applied to the stamp is in turn transferred to a suited substrate in order to apply a structure onto the latter.