

Title (en)

MATERIALS FOR INCREASING THE UPCONVERSION OF NEAR-INFRARED AND/OR VISIBLE RADIATION

Title (de)

MATERIALIEN ZUR VERSTÄRKUNG DER AUFKONVERTIERUNG VON NAHINFRAROTER UND/ODER SICHTBARER STRAHLUNG

Title (fr)

MATÉRIAUX PERMETTANT D'AUGMENTER LA CONVERSION ASCENDANTE D'UN RAYONNEMENT PROCHE INFRAROUGE ET/OU VISIBLE

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Application

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Abstract (en)

[origin: WO2021058342A1] The invention relates to layer systems (100) for upconverting near-infrared and/or visible radiation and to a method for producing a layer system for upconverting near-infrared and/or visible radiation. The method comprises forming a photonic crystal (110) having a first side (111) and a second side (112) by means of nano-embossing lithography; and applying an upconversion material (120) to the first side (111) and/or the second side (112) of the photonic crystal (110). The upconversion material (120) contains a first lanthanoid and a second lanthanoid. Layer systems (100) having a photonic crystal and an upconversion material are furthermore described.

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