

Title (en)

REVERSIBLE ELECTROCHEMICAL MIRROR FOR MODULATION OF REFLECTED RADIATION

Title (de)

UMSCHALTBARER ELEKTROCHEMISCHER SPIEGEL ZUR MODULATION REFLEKTIERTER STRAHLUNG

Title (fr)

MIROIR ELECTROCHIMIQUE REVERSIBLE PERMETTANT DE MODULER UN RAYONNEMENT REFLECHI

Publication

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Application

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Abstract (en)

[origin: WO0036580A1] An electrochemical mirror includes a transparent first electrode (106) and a second electrode (110). An electrolytic solution (112), disposed between the first and second electrodes, contains ions (116) of a metal which can electrodeposit on the electrodes. A negative electrical potential (118) applied to the first electrode causes deposited metal to be dissolved from the second electrode into the electrolytic solution and to be electrodeposited from the solution onto the first electrode, thereby affecting the reflectivity of the mirror for electromagnetic radiation (122). A surface modification layer (108) applied to the first electrode ensures that the electrodeposit is substantially uniform, resulting in a mirror layer which increases the reflectivity of the mirror. A positive electrical potential (118) applied to the first electrode causes deposited metal to be dissolved from the first electrode and electrodeposited from the solution onto the second electrode, thereby decreasing the reflectivity of the mirror.

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