

Title (en)  
SELECTIVE CATALYTIC ACTIVATION OF NON-CONDUCTIVE SUBSTRATES

Title (de)  
SELEKTIVE KATALYTISCHE AKTIVIERUNG NICHTLEITENDER SUBSTRATE

Title (fr)  
ACTIVATION CATALYTIQUE SELECTIVE DE SUBSTRATS NON CONDUCTIFS

Publication  
**EP 1856309 A4 20091028 (EN)**

Application  
**EP 06734240 A 20060202**

Priority  
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• US 4982805 A 20050203

Abstract (en)  
[origin: US2005241951A1] A process of providing a pattern of a metal on a non-conductive substrate to create loop antennae for wireless articles, for creating circuitry for smart cards, such as phone cards, and for providing electromagnetic shielding of electronic devices is provided. The method comprises the steps of catalyzing the non-conductive substrate by applying a catalytic ink, reducing a source of catalytic metal ions in the catalytic ink to its associated metal, depositing electroless metal on the pattern of catalytic ink on the surface of the substrate; and plating electrolytic metal on the electroless metal layer to produce the desired pattern of metal on the non-conductive substrate. The catalytic ink typically comprises one or more solvents, a source of catalytic metal ions, a crosslinking agent, one or more copolymers, a polyurethane polymer, and, optionally, one or more fillers.

IPC 8 full level  
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CPC (source: EP US)  
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Citation (search report)  
• [XA] GB 1403197 A 19750828 - BELL & HOWELL CO  
• [A] WO 9221790 A1 19921210 - MONSANTO CO [US]  
• [A] US 4368281 A 19830111 - BRUMMETT CHARLES R, et al  
• [A] US 6461678 B1 20021008 - CHEN KEN S [US], et al  
• See references of WO 2006084064A2

Citation (examination)  
• US 3900320 A 19750819 - ROLKER JOHN H, et al  
• US 2002001709 A1 20020103 - VOSS JOCHEN [DE]

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