

## **New membrane-electrode assembly (MEA) and methods of producing the same**

### **Abstract**

The present invention describes devices aimed mainly, but not exclusively, at improving the performance of membrane-electrode assemblies ("membrane-electrode assembly", MEA) for application in fuel cells. These findings have been conceived mainly, but not exclusively, for MEAs that include electrocatalyst materials comprising a carbon nitride matrix. The findings described in the present invention allow: (i) to improve the mutual compatibility between the various layers of which the MEA is composed, facilitating the migration of the ionic species; and (ii) improve the accessibility of the active sites of the electrocatalyst to the reagents and products of the electrochemical processes necessary for the operation of the MEA.