

Carbonized Nickel Complex of Sodium Pectate as Catalyst for Proton-Exchange Membrane Fuel Cells

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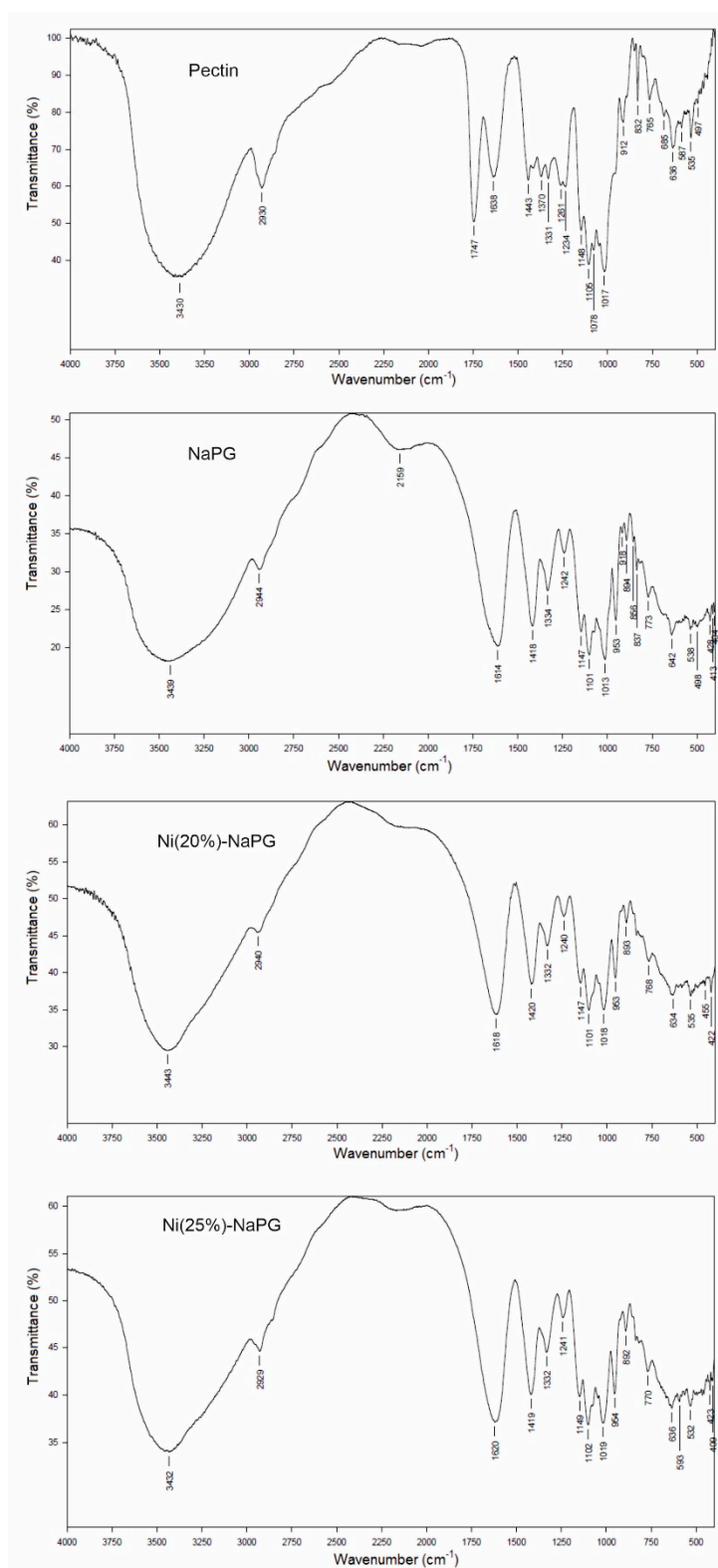


Figure S1. IR spectra of the pectin, sodium polygalacturonate (NaPG) and sodium polygalacturonate complexes [Ni(20%)-NaPG], [Ni(25%)-NaPG] with 20% and 25% substitution of sodium with nickel, consequently.

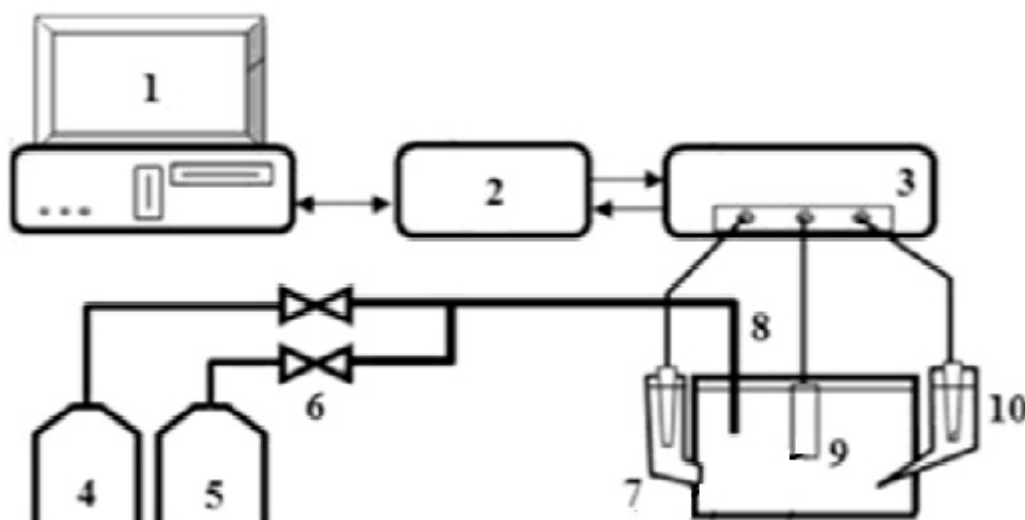


Figure S2. The scheme of electrochemical set-up. 1- computer, 2 – potentiostat Elins P-20x, 3 – rotating disc electrode – Basi RDE-2, 4 – vessel with inert gas (Ar), 5 – vessel with oxygen, 6 – valve of microadjusting, 7 – counter electrode, 8 – capillary for gas introducing, 9 – working electrode, 10 – reference electrode.

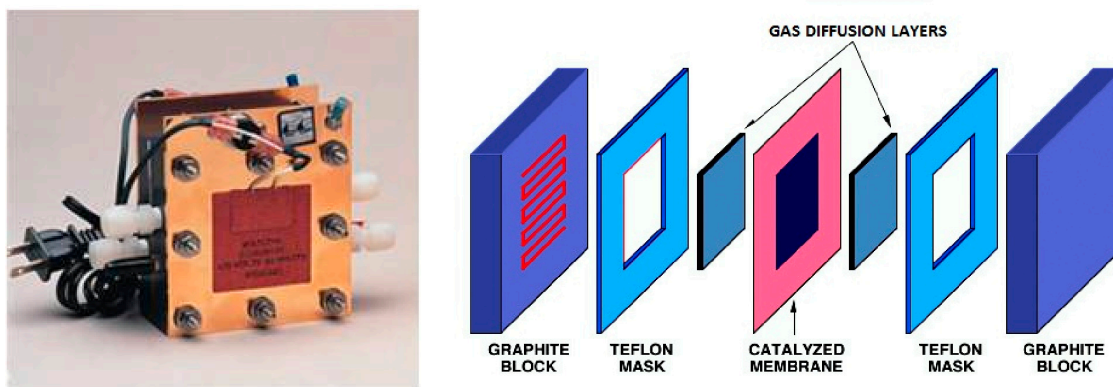


Figure S3. Scheme and appearance of the standard PEMFC used in the tests.