In order to make the electrodes used in biofuel cells, in which electricity is generated by microorganisms, cheaper, it is appropriate to use cheap and ecologically clean carbon made from carbonized wood. Carbonized wood is loose and its electrical conductivity depends on particle size and degree of compression, so it needs to be compressed before use. On the other hand, the conductivity of carbonized wood depends on the carbonization temperature. The mass of wood heated to 300-500ºC decreases by 60-70%, and the relative concentration of carbon increases, respectively, up to 70 and 90%. However, the main components of the wood mass decompose only after reaching a temperature of 500ºC. The primary decomposition products formed during this process are not elemental carbon, but a mixture of electrically non-conductive resins. Therefore, carbonized wood (charcoal) at this temperature is not yet electrically conductive, which is one of the technological problems that prevents the efficient use of this carbon in fuel cell electrodes. The technology described in this patent application significantly increases the electrical conductivity of formed carbon structures and enables the use of carbonized carbon in biofuel cells.