Intelligent Polymerized Crystalline Colloidal Array Carbohydrate Sensor

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Technology description

The present invention is related to glucose sensors that are capable of detecting the concentration or level of glucose in a solution or fluid having either low or high ionic strength. The glucose sensors of the present invention comprise a polymerized crystalline colloidal array (PCCA) and a molecular recognition component capable of responding to glucose. The molecular recognition component may be a boronic acid, such as a phenylboronic acid, glucose oxidase, a combination of phenylboronic acid and poly(ethylene)glycol or crown ether, or another component capable of detecting glucose in various fluids and solutions. The glucose sensors of the present invention may be useful in the development of noninvasive or minimally invasive in vivo glucose sensors for patients having diabetes mellitus.

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