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(54) Title: AN ELECTRODE WITH ULTRALOW BIOELECTRONIC IMPEDANCE BASED ON MOLECULE ANCHORING

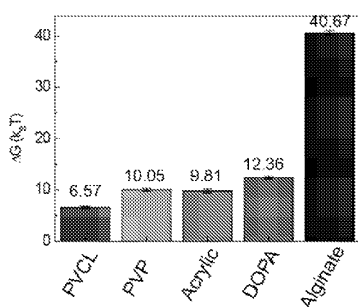


FIG. 6 f

(57) Abstract: Disclosed herein is an ionic conducting gel that comprises a polymeric adhesive material in an amount of from 5 to 20 wt% of the gel, a metal salt in the amount of from 2 to 10 wt% of the gel, and the balance being a hydrophilic polymeric material, wherein a gel matrix is formed by intermolecular interactions between the polymeric adhesive material and the hydrophilic polymeric material, and the metal salt is distributed throughout the gel matrix. Also disclosed herein are a flexible electrode device, comprising a flexible substrate material having a first surface and a second surface, a metal electrode pad on the first surface of the substrate, and an ionic conducting gel layer that covers the metal electrode pad, and a prosthetic control system comprising one or more electrode devices.

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