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(54) **Title:** ELECTRODE ASSEMBLY FOR APPLYING TUMOR TREATING FIELDS (TTFIELDS) WITH A SHEET OF ANISOTROPIC MATERIAL

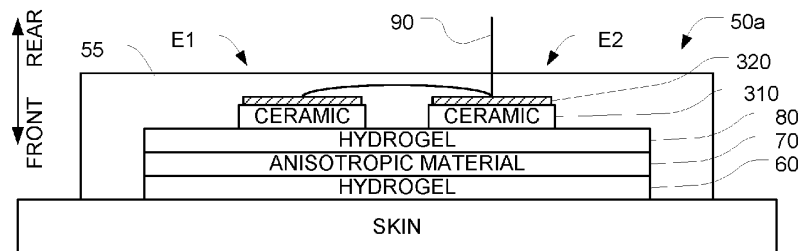


FIG. 3A

(57) **Abstract:** Alternating electric fields (e.g., TTFields) may be applied to a subject's body using one or more electrode assemblies that includes a sheet of anisotropic material, at least one layer of conductive material disposed on the front face of the sheet of anisotropic material, and an electrode element positioned behind the sheet of anisotropic material. The electrode element has a front face disposed in electrical contact with the rear face of the sheet of anisotropic material. The sheet of anisotropic material spreads both heat and current out in directions that are parallel to the front face of the sheet, which eliminates or at least minimizes hot spots on the electrode assembly. This in turn makes it possible to increase the current without exceeding a temperature safety threshold (e.g., 41° C).

WO 2023/012707 A1