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(54) Title: BIOCOMPATIBLE MATERIALS FOR MAMMALIAN STEM CELL GROWTH AND DIFFERENTIATION

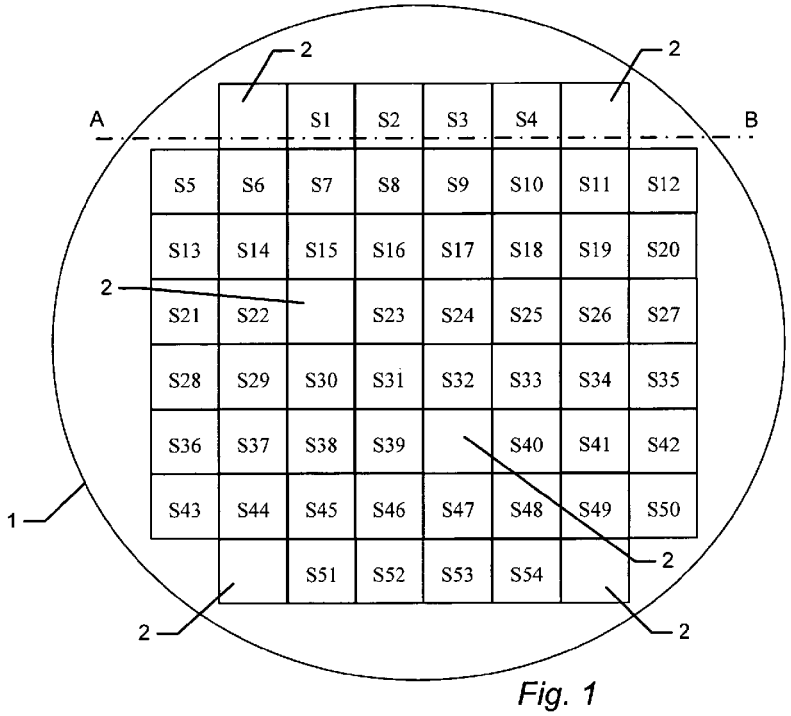


Fig. 1

(57) Abstract: A biocompatible material, wherein at least a part of a surface of the biocompatible material is characterized by a micro or nano-meter scale topographical structure comprising a plurality of features where the structure is selected to promote the growth of undifferentiated pluripotent stem cells or serve to promote the uniform differentiated growth of stem cells. Furthermore, a biocompatible material is provided having a surface structure and composition that affects a cellular function, in particular cellular functions related to gene induction, cell differentiation and the formation of bone tissue in vivo and ex-vivo.

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