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(54) Title: SEMICONDUCTOR ON INSULATOR APPARATUS AND METHOD

(57) Abstract: A method and apparatus for producing a relatively thin, relatively uniform semiconductor layer which has improved carrier mobility. In an embodiment, a lattice-matched insulator layer is formed on a semiconductor substrate, and a lattice-matched semiconductor layer is formed on the insulator layer to form a relatively thin, relatively uniform semiconductor on insulator apparatus. In embodiments of the method and apparatus, energy band characteristics may be used to facilitate the extraction of the well-region minority carriers.