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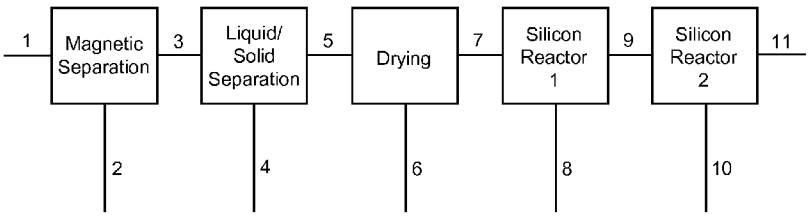


Figure 1

(57) Abstract: Methods, systems, and apparatus are disclosed herein for recovery of high-purity silicon, silicon carbide and PEG from a slurry produced during a wafer cutting process. A silicon-containing material can be processed for production of a silicon-rich composition. Silicon carbide and PEG recovered from the silicon-containing material can be used to form a wafer-saw cutting fluid. The silicon-rich composition can be reacted with iodine containing compounds that can be purified and/or used to form deposited silicon of high purity. The produced silicon can be used in the photovoltaic industry or semiconductor industry.

WO 2009/126922 A3