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(71) Applicant *(for all designated States except US)*: **AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 20 Biopolis Way #07-01, Centros, Singapore 138668 (SG).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **SINGH, Navab** [IN/SG]; c/o Institute of Microelectronics, 11 Science Park Road, Singapore Science Park 2, Singapore 117685 (SG). **JIANG, Yu** [CN/SG]; c/o Institute of Microelectronics, 11 Science Park Road, Singapore Science Park 2, Singapore 117685 (SG). **LO, Guo Qiang, Patrick** [US/SG]; c/o Institute of Microelectronics, 11 Science Park Road, Singapore Science Park 2, Singapore 117685 (SG).

(74) Agent: **SCHIWECK, Wolfram**; Viering, Jentschura & Partner LLP, P.O. Box 1088, Rochor Post Office, Rochor Road, Singapore 911833 (SG).

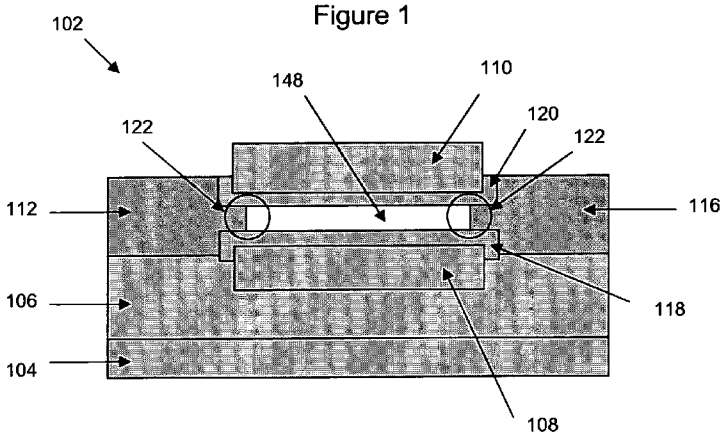
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(54) **Title:** A SILICON-GERMANIUM NANOWIRE STRUCTURE AND A METHOD OF FORMING THE SAME

Figure 1



(57) **Abstract:** A silicon-germanium nanowire structure arranged on a support substrate is disclosed, The silicon-germanium nanowire structure includes at least one germanium-containing supporting portion arranged on the support substrate, at least one germanium-containing nanowire disposed above the support substrate and arranged adjacent the at least one germanium-containing supporting portion, wherein germanium concentration of the at least one germanium-containing nanowire is higher than the at least one germanium-containing supporting portion. A transistor comprising the silicon-germanium nanowire structure arranged on a support substrate is also provided. A method of forming a silicon-germanium nanowire structure arranged on a support substrate and a method of forming a transistor comprising forming the silicon-germanium nanowire structure arranged on a support substrate are also disclosed.

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