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(71) Applicant *(for all designated States except US)*: **NANOCONDUCTION, INC.** [US/US]; 248 University Avenue, Los Gatos, CA 95030 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **DANGELO, Carlos** [US/US]; 248 University Avenue, Los Gatos, CA 95030 (US).

(74) Agents: **HAMRICK, Claude, A., S.** et al.; Burns, Doane, Swecker & Mathis, LLP, PO Box 1404, Alexandria, VA 22313-1404 (US).

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(54) Title: SYSTEM AND METHOD USING SELF-ASSEMBLED NANO STRUCTURES IN THE DESIGN AND FABRICATION OF AN INTEGRATED CIRCUIT MICRO-COOLER

(57) Abstract: Heat sink structures employing carbon nanotube or nanowire arrays to reduce the thermal interface resistance between an integrated circuit chip and the heat sink are disclosed. Carbon nanotube arrays are combined with a thermally conductive metal filler disposed between the nanotubes. This structure produces a thermal interface with high axial and lateral thermal conductivities.