Paper ID: 17615
oral

MATERIALS AND STRUCTURES SYMPOSIUM (C2)
Poster Session (P)

Author: Mr. Michael Kio
National Space Research and Development Agency (NASRDA), United Kingdom, m.t.kio@cranfield.ac.uk

Dr. OLUFEMI ABGOOLA
National Space Research and Development Agency (NASRDA), Nigeria, agbula3@yahoo.com

MOLECULAR DYNAMIC SIMULATION OF COMPONENT AND PLATE INTERFACES IN A NANOSATELLITE

Abstract

TEMPERATURE DISTRIBUTION IN PARALLEL PLATES THAT SITS COMPONENT IN A NANOSATELLITE IS REPORTED USING MOLECULAR DYNAMICS. A MASS VALUE OF 1 IN DIMENSIONAL UNITS IS CONSIDERED FOR THE PLATES. THE WALLS OF THE PARALLEL PLATE IS DAMPED WITH A SPRING CONSTANT RANGING FROM 3000-5000 . DIFFERENT VALUES OF ENERGY DEPTH AND LENGTH SCALES WILL BE CONSIDERED. THE INVESTIGATION WILL BE BASED ON THE EFFECT OF SURFACE INTERACTION AND STIFFNESS CONSTANT ON THE HEAT TRANSFER AND TEMPERATURE DISTRIBUTION BETWEEN THE INTERFACES OF THE PLATE AND THE COMPONENT.