

Canadian Association of Physicists

Association canadienne des physiciens et physiciennes

Contribution ID: 2405

Type: Oral (Non-Student) / Orale (non-étudiant(e))

Conduction electrons are entirely responsible for the heat generated by a constant electric current flowing in a wire

Monday 3 June 2019 11:15 (15 minutes)

It is shown that energy transported entirely by conduction electrons is totally responsible for the heat generated by a constant electric current in a wire and that possible energy flows associated solely with the electric and magnetic fields make no contribution whatsoever to the heat generation.

Authors: Prof. CURZON, Albert (SFU); Prof. CURZON, Frank (University of British Columbia)

Presenter: Prof. CURZON, Albert (SFU)

Session Classification: M1-10 Materials synthesis and characterization I (DCMMP) | Synthèse et caractérisation de matériaux I (DPMCM)

Track Classification: Condensed Matter and Materials Physics / Physique de la matière condensée et matériaux (DCMMP-DPMCM)