Accepted Manuscript

Electro-osmotic flow of power-law fluid and heat transfer in a micro-channel with effects of Joule heating and thermal radiation

G.C. Shit, A. Mondal, A. Sinha, P.K. Kundu

PII: S0378-4371(16)30417-4
DOI: http://dx.doi.org/10.1016/j.physa.2016.06.142
Reference: PHYSA 17335

To appear in: *Physica A*

Received date: 17 February 2016
Revised date: 6 June 2016

Please cite this article as: G.C. Shit, A. Mondal, A. Sinha, P.K. Kundu, Electro-osmotic flow of power-law fluid and heat transfer in a micro-channel with effects of Joule heating and thermal radiation, *Physica A* (2016), http://dx.doi.org/10.1016/j.physa.2016.06.142

Highlights

- The electro-osmotic flow of biofluids in a slit microchannel is investigated.
- We employed power-law fluid model to represent non-Newtonian behavior of biofluid
- Examined the effects of Joule heating, thermal radiation, temperature jump and wall slip
- The flow fields (temperature and velocity) have significant impact on these parameters.