|  |  |  |  |
| --- | --- | --- | --- |
| Title | [MHD boundary layer bionanoconvective non‐Newtonian flow past a needle with Stefan blowing](https://onlinelibrary.wiley.com/doi/abs/10.1002/htj.21403) | | |
| Author(s) Name | NA Amirsom, Uddin Mohammed Jashim, Ahmad Izani md Ismail | | |
| Contact Email(s) | ***jashim\_74@yahoo.com*** | | |
| Published Journal Name | Heat Transfer—Asian Research | | |
| Type of Publication | Journal | | |
| Volume | 48 | Issue | 02 |
| Publisher | WILEY | | |
| Publication Date | 2019/3 | | |
| ISSN | 1099-2871 | | |
| DOI | * <https://doi.org/10.1002/htj.21403> | | |
| URL |  | | |
| Other Related Info. |  | | |
|  | | | |

|  |  |
| --- | --- |
| Abstract |  |

The purpose of the article is to present a transport model for magnetohydrodynamics‐forced convective non‐Newtonian boundary flow from a thin needle in a nanofluid in the presence of microorganisms and Stefan blowing. The governing equations are reduced to ordinary differential equations with the help of similarity transformations and then numerically solved by using the Matlab bvp4c function. The effect of various emerging parameters on the flow field, heat, mass, and density of motile microorganisms transfer was computed and studied. It was found that some of the parameters have an important effect on the boundary layer thickness. Justification with earlier simpler model in the absence of magnetic field is included. The model finds applications in various transdermal delivery system, biomedical electromagnetic treatments and to design new medical devices for cell delivery to the central nervous system.