**COVER LETTER FOR SUBMISSION OF MANUSCRIPT**

Nurlan Temirbekov, Yerzhan Malgazhdarov, Dinara Tamabay and Almas Temirbekov, Corresponding author – Dinara Tamabay

16-08-2023

Dear reviews and editor committee,

We wish to submit an original research article entitled “Mathematical modeling of atmospheric transformation of pollutants considering weather conditions and time of day” for consideration by the academic journal “Indonesian Journal of Electrical Engineering and Computer Science”.

We confirm that this work is original, and it has not been previously published in whole or in part elsewhere. It is also not currently under consideration for publication elsewhere.

We confirm that we have read the final version of the manuscript, have approved the submission to the journal, and have accepted full responsibilities pertaining to the manuscript’s delivery and contents.

This paper is devoted to the problem of the propagation of harmful impurities in the atmosphere from point sources, with the photochemical transformation. The model of the boundary layer of the atmosphere and the equation of transport and transformation of impurities are considered, taking into account the parameter that describes photochemical transformations depending on weather conditions and time of day on the example of the city of Ust-Kamenogorsk.

An application software package has been developed for numerical modelling of atmospheric air pollution, taking into account photochemical transformations and visualizations of corresponding scenarios.

The results of numerical modeling of the distribution and transformation of harmful impurities against the background of mesometeorological processes with the terrain and water surfaces are presented.

We believe that this manuscript makes a significant contribution to the field of computational mathematics.

The authors declare that they have no conflicts of interest regarding the submitted manuscript.

The authors state that they will pay an article processing charge (APC).

Thank you for your consideration of this manuscript.

Sincerely,

Dinara Tamabay.

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Email | Affiliation | Country |
| Nurlan Temirbekov | [temirbekov@rambler.ru](mailto:temirbekov@rambler.ru) | National Engineering Academy RK, Al-Farabi Kazakh National University | Kazakhstan |
| Yerzhan Malgazhdarov | [malgazhdarov\_e@mail.ru](mailto:malgazhdarov_e@mail.ru) | Sarsen Amanzholov East Kazakhstan University | Kazakhstan |
| Dinara Tamabay | [dtamabay@gmail.com](mailto:dtamabay@gmail.com) | Al-Farabi Kazakh National University | Kazakhstan |
| Almas Temirbekov | [temirbekov.almas@kaznu.kz](mailto:temirbekov.almas@kaznu.kz) | Al-Farabi Kazakh National University | Kazakhstan |