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Large eddy simulation of a turbulent diffusion flame including thermal radiation heat transfer

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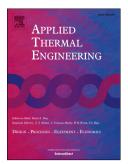
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## ACCEPTED MANUSCRIPT

## **Research Highlights:**

- FireFOAM was validated against experimental data and FDS simulation results.
- The flame simulations were performed using large eddy simulation including radiation.
- Spectral analysis was used to confirm mesh adequacy for the LES simulations.
- FireFOAM results yielded good agreement with the available experimental data.
- FireFOAM predicted more adequate flame temperatures than FDS.

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