Dear Editor:

I wish to submit a research paper for publication in *Journal of Marine Science and Engineering,* titled **“Numerical study of hydrodynamic characteristics of three-dimensional oscillating water-column wave-power device”**.

Oscillating water column (OWC) devices are one of the key technologies for capturing wave energy, where circular designs are popular for their efficiency and economy. Nevertheless, the problem of damage to these devices under harsh ocean conditions highlights the urgent need for structural integrity. Currently, the complex force characteristics of three-dimensional OWC devices limit the depth of experimental studies, while most of the existing studies focus on two-dimensional models.

In this study, we have developed a three-dimensional numerical model of an OWC wave-power device. We have validated the model using experimental data and theoretical calculations, and conducted a comprehensive study of the device's hydrodynamic performance.Our research investigates the impact of different wave periods, water depths, and wave heights on the forces experienced by the device. Furthermore, we have examined the variations in dynamic water pressure on both sides of the device's front wall.

We believe that our research will provide valuable reference values for the design and optimisation of OWC devices. We also suggest future research directions, including considering the compressibility of air, oblique incidence, and introducing higher-order and irregular waves.

We believe that the findings of this study are relevant to the scope of your journal and will be of interest to its readership.

This manuscript has not been published or presented elsewhere in part or in entirety, and is not under consideration by another journal**.** All study participants provided informed consent, and the study design was approved by the appropriate ethics review boards. There are no conflicts of interest to declare.

Thank you for your consideration. I am looking forward to hearing from you.

Sincerely,

Peng Tang

College of Ocean Science and Engineering, Shanghai Maritime University, Shanghai, China

86-21-38284828

ptang@shmtu.edu.cn