

Figure S1: Polyhedral mesh generated by Ansys Fluent meshing. From left to right increasing mesh density of 100 000, 400 000 to 700 000 polyhedral cells.

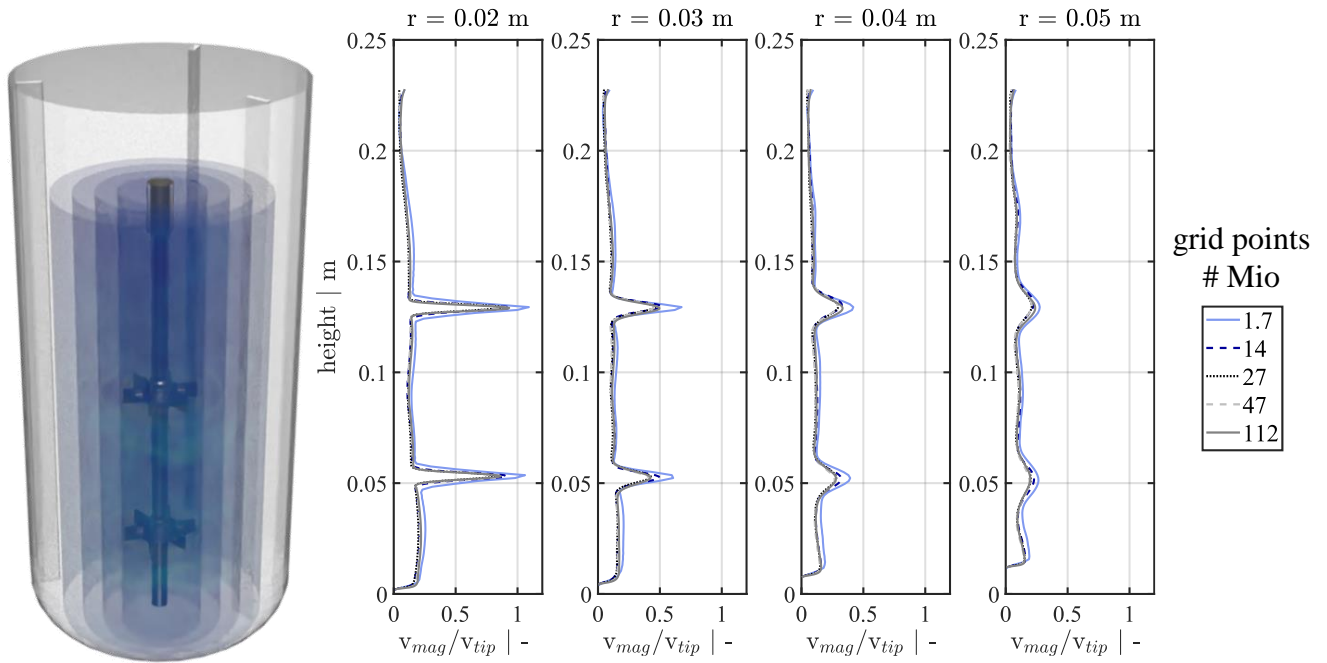


Figure S2: Time and azimuthal averaged profiles of normalized velocity magnitude for the baffled system at $n = 250$ rpm. Axial profiles are shown averaged at a specific radial position.

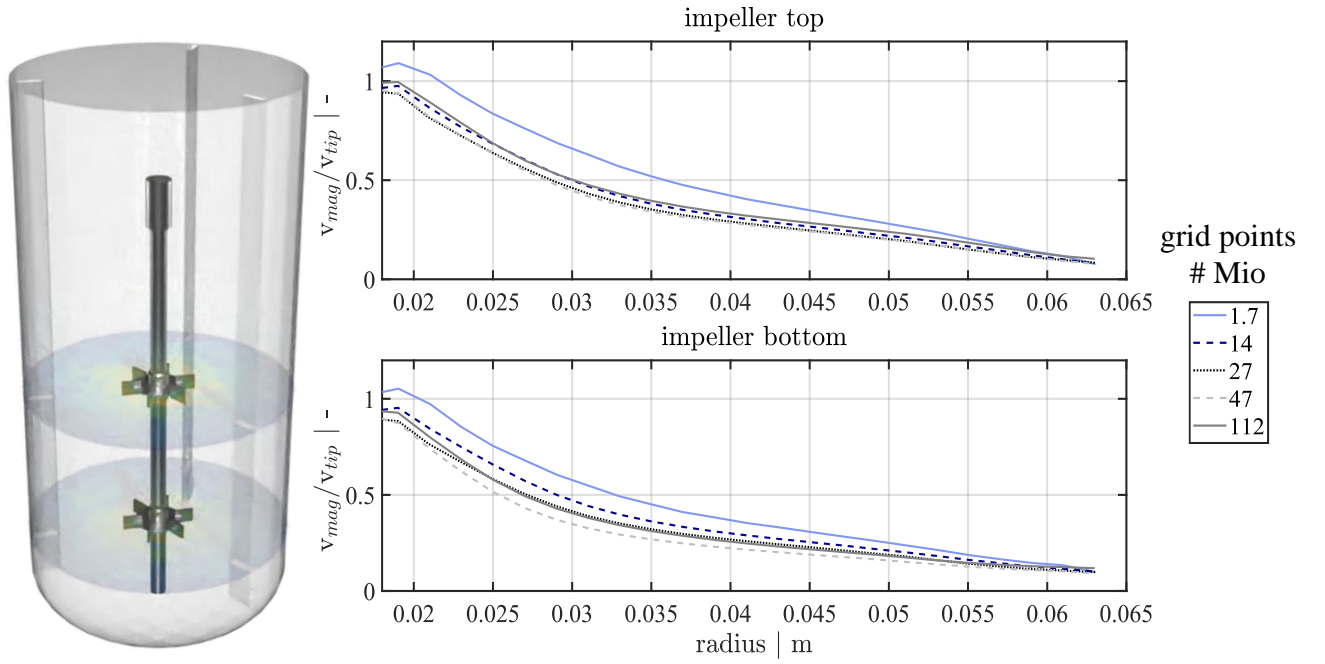


Figure S3: Time and azimuthal averaged profiles of normalized velocity magnitude for the baffled system at $n = 350$ rpm. Profiles were averaged at different radial positions within the impeller discharge stream of top and bottom impeller.

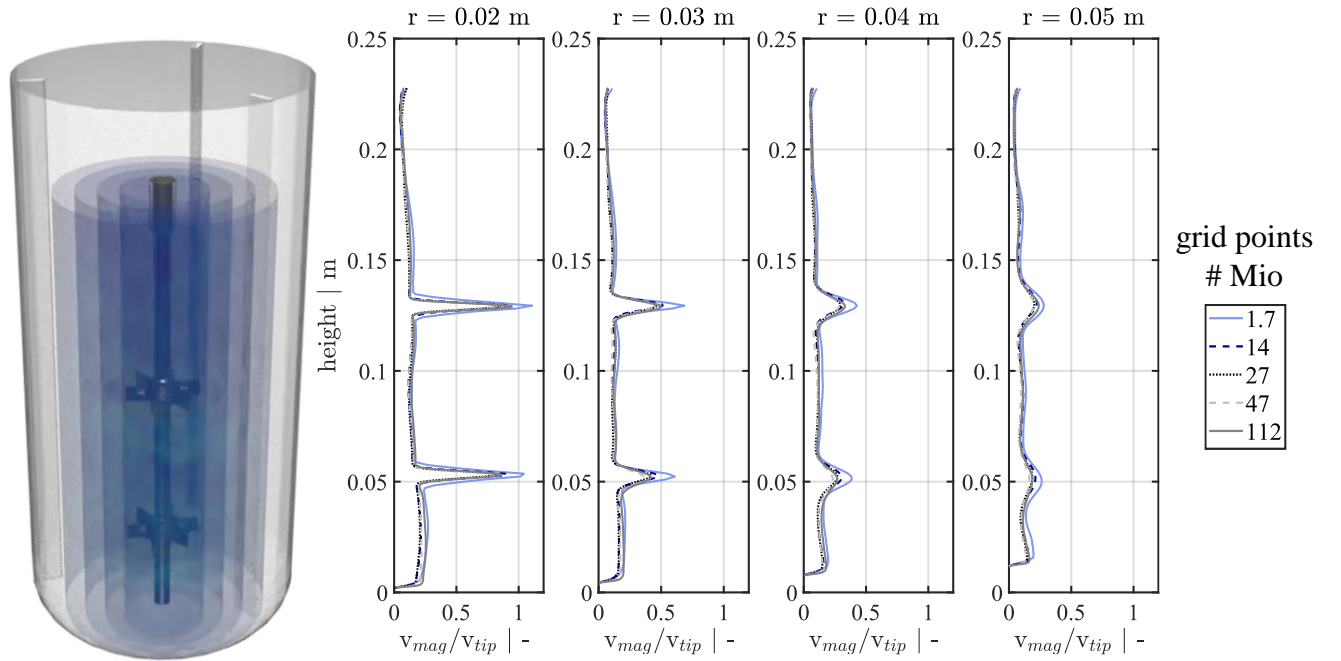


Figure S4: Time and azimuthal averaged profiles of normalized velocity magnitude for the baffled system at $n = 350$ rpm. Axial profiles are shown averaged at a specific radial position.

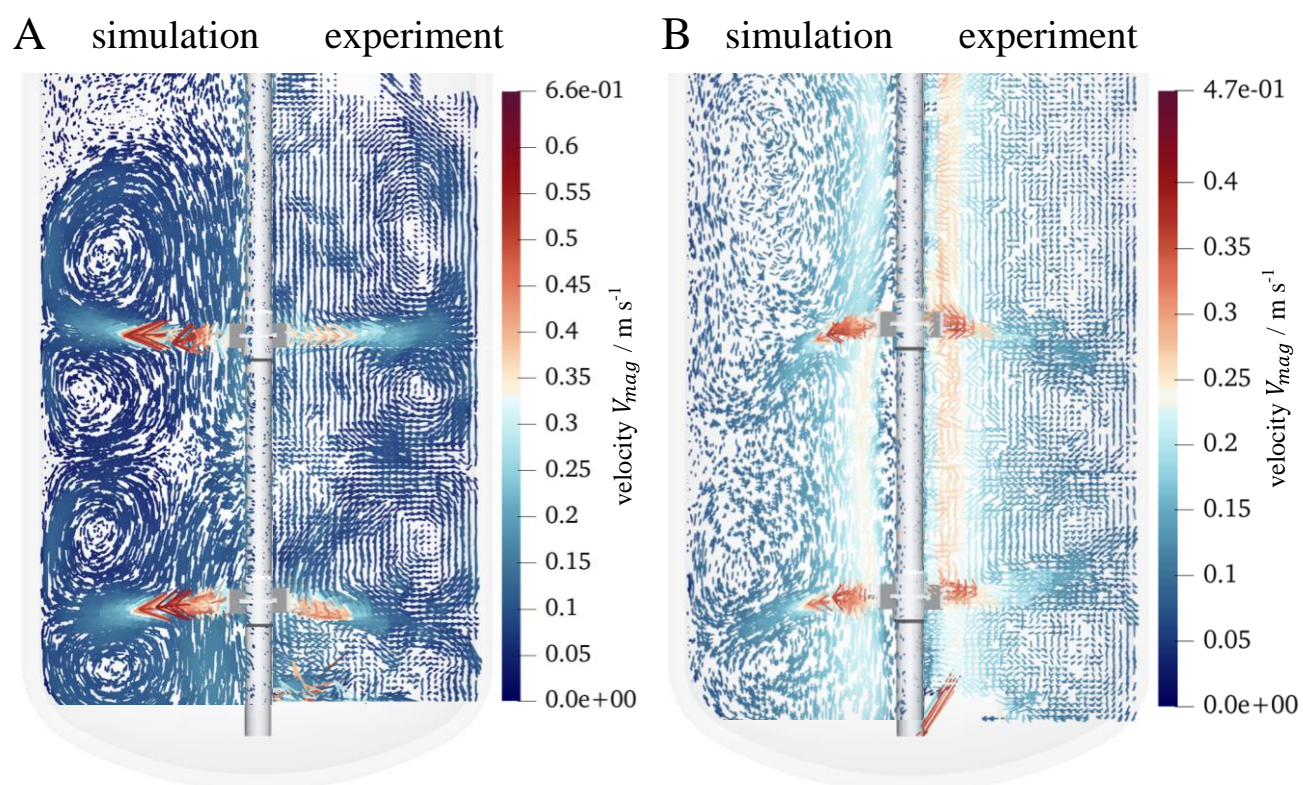


Figure S5: Time averaged velocity magnitude vector field of the baffled system at $n = 350$ rpm (A) and the unbaffled system at $n = 250$ rpm (B).