
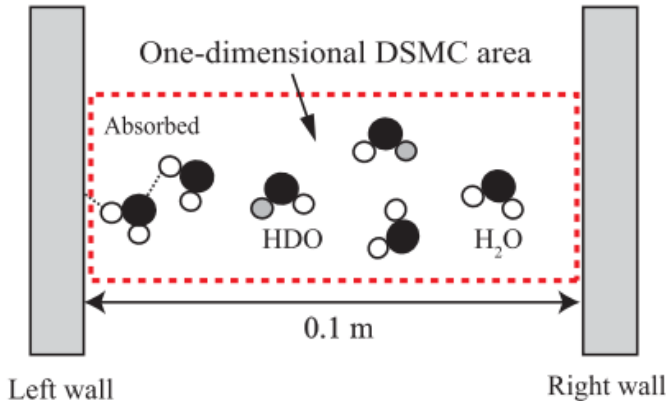


SKLplanet Academic Staff Resume

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| Name | YU, HSIN-CHEN | Gender | Male |  |
| Working Organization | State Key Laboratory of Lunar and Planetary Sciences | | | |
| Address | Avenida Wai Long, Taipa, Macau | | | |
| E-mail | yuhsinchen@must.edu.mo | | | |
| Academic Qualification | Ph.D. in Earth and Planetary Science, Macau University of Science and Technology (2023) Master in Physical Philosophy, Nanjing University (2019) Bachelor in Physical Philosophy, Nanjing University (2017) | | | |
| Skills | FORTRAN, Direct Simulation Monte Carlo, BET theory | | | |
| Main works finished during the career | <div><p>Phys. Fluids 35, 122106 (2023)</p><ol style="list-style-type: none">1. We established a DSMC model to consider the gas adsorption phenomenon on the particle surface in gas-particle flows.2. We introduced a two-way coupled DSMC model to simulate the multilayer gas-adsorption phenomenon (the BET theory) on the surface of porous materials.</div> | | | |

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| <p style="text-align: center;">Key Publications (8 first-author papers)</p> | <p>Yu, H. & Zhang, X. (2022). Molecular-kinetic study of multilayers gas-adsorption in a rarefied gas environment. <i>Physics of Fluids</i>, 34, 123106.</p> <p>Yu, H., Zhang, X., Cao, N., Kan, R., Xu, Y., & Ren, Z. (2023). Unveiling the non-equilibrium process in multilayer mixture adsorption. <i>Physics of Fluids</i>, 35(12).</p> <p>Yu, H., Zhang, X., & He, P. (2022). Direct simulation Monte Carlo of the gas-adsorption of particles in gas–particle flows. <i>Physics of Fluids</i>, 34(8), 083302.</p> <p>Yu, H., Zhang, X., Ye, Q., Ouyang, W., He, P., ..., & Ren, Z. (2023). Density-dependent drag coefficient for gas-adsorbed particles in free-molecule flows. <i>Physics of Fluids</i>, 35(5).</p> <p>Yu, H., Zhang, X., Wu, L., Ren, Z., & He, P. (2024). Gas physisorption impact on prolate dust in free-molecule flows: A static study. <i>Physics of Fluids</i>, 36(5).</p> <p>Yu, H., Zhang, X., Wu, L., Ren, Z., & Ye, Q. (2025). Exploring prolate ellipsoidal dust transport in free-molecule flows using flux density calculation and Euler's laws. <i>Physics of Fluids</i>, 37(3).</p> <p>You, J., Zhang, X., Yu, H., Zhang, H., Li, C., Bugiolacchi, R., ... & Nie, J. (2023). Unveiling the mechanics of lunar regolith erosion through analysis of CE-4 and CE-5 landing images and fluid simulation. <i>Acta Astronautica</i>, 208, 343-354.</p> <p>He, P., Xu, X., Yu, H., Wang, X., ... & Li, H. (2022). The Mercury's bow shock models near perihelion and aphelion. <i>Astronomical Journal</i>, 164 260.</p> <p>You, J., Zhang, X., Zhang, H., Li, C., Xu, Y., Yan, Q., ... & Zhi, Q.(2021). Analysis of plume–lunar surface interaction and soil erosion during the Chang'E-4 landing process. <i>Acta Astronautica</i>, 185, 337-351.</p> |
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