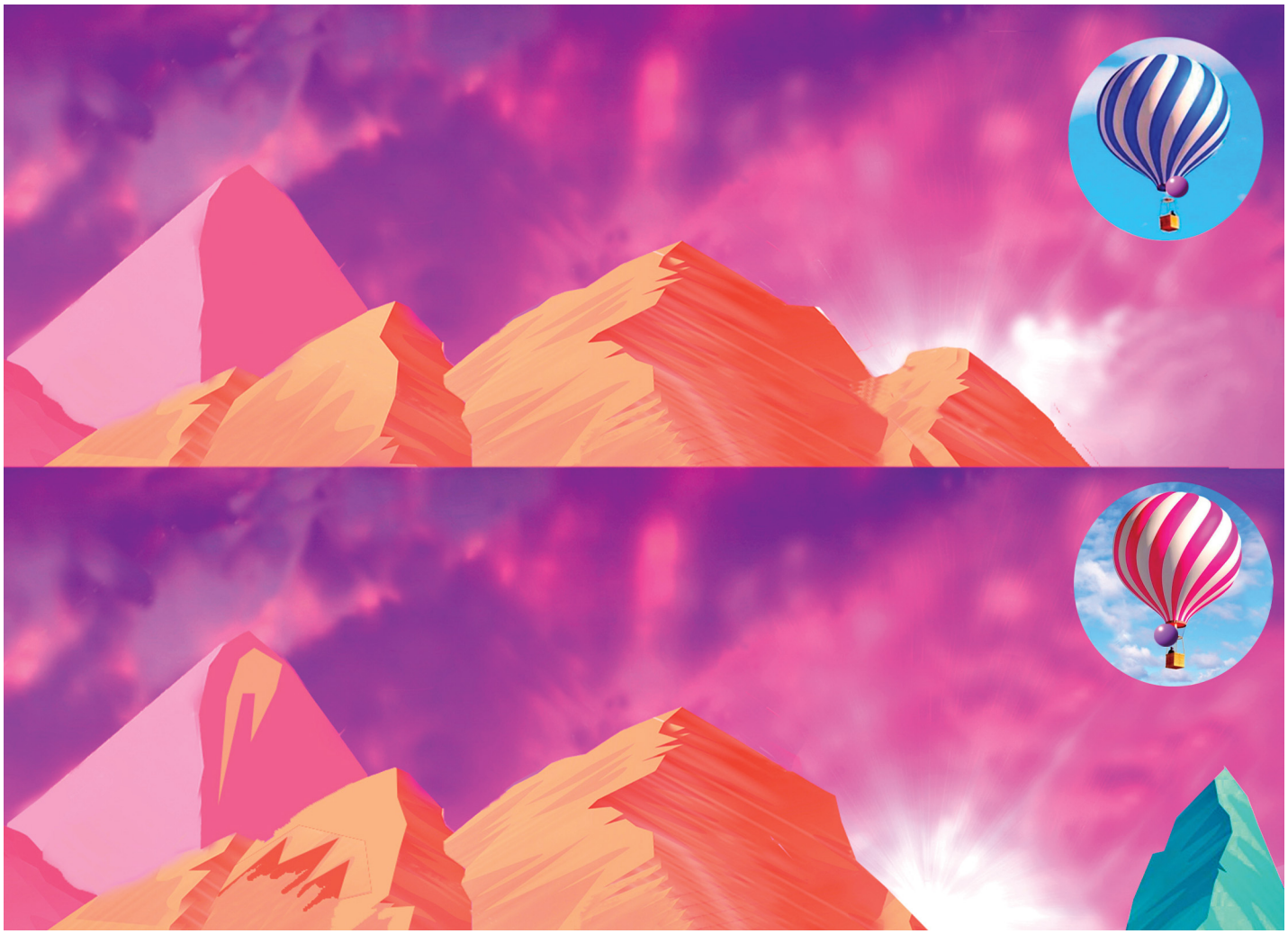

Showcasing research from Prof. Sungyul Lee at Kyung-Hee University, South Korea and Prof. Xianglei Kong at Nankai University, China

Distinguishing gas phase lactose and lactulose complexed with sodiated L-arginine by IRMPD spectroscopy and DFT calculations

This work investigates lactose/ and lactulose/$ArgNa^+$ in the gas phase. Calculated IR spectra are compared with IRMPD spectra to elucidate the origin of the differentiation of lactose and lactulose. The distinct gaps in the high frequency zone in the IRMPD spectra, which are the signatures to be used as an instrumental tool for distinguishing the two disaccharides, result from different local interactions between the specific –OHs in the host sugars and the two functional groups (guanidium and $-CO_2^-Na^+$) in the $ArgNa^+$ guest.

As featured in:

See Sungyul Lee, Xianglei Kong *et al.*, *Phys. Chem. Chem. Phys.*, 2023, **25**, 25116.

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