# Inside the bubble: primeval Lyman-α emitting galaxies reveal early sites of reionization

Unless situated in sufficiently (re)ionized regions, Lyman-α emission from galaxies in the Epoch of Reionization experiences strong absorption by neutral intervening gas. Observations of Lyman-α have therefore been widely used from inferring the sizes of the first ionized 'bubbles' to studying the cosmic evolution of the neutral hydrogen fraction of the intergalactic medium (IGM). However, ground-based efforts were successful at uncovering Lyman-α emission only in a limited number of bright z ~ 7 galaxies, such that prior to *JWST* our understanding of the ionizing contribution of fainter sources and the properties of ionized bubbles at earlier stages of reionization remained uncertain. In this talk, I will present the discovery of Lyman-α emitting galaxies (LAEs) up to redshift z ~ 9 newly identified with *JWST*/NIRSpec, providing an overview of their physical and environmental properties. A significant number of reionization-era LAEs are found to coincide with confirmed large-scale galaxy overdensities, suggesting Lyman-α transmission is strongly enhanced in such overdense regions, and underlining the importance of LAEs as signposts of the first ionized bubbles. We find these galaxies and their direct neighbours are generally not able to produce the ionized regions required to explain the high Lyman-α escape fractions, suggesting lower-luminosity sources likely play an important role in carving out these bubbles. Finally, I will place these findings in the context of strong Lyman-α absorption at the redshift frontier (z > 9) far exceeding that expected only by the IGM, which may have a significant impact on the estimation of photometric redshifts. Together, these findings demonstrate the power of *JWST* spectroscopy in acquiring a unique view of early galaxy evolution and cosmic reionization.