

## The Stickers-and-Spacers Framework for Describing Biomolecular Phase Separation

(<sup>1</sup>*Department of Chemistry, Pusan National University*) ○Jeong-Mo Choi<sup>1</sup>

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In the last decade, there has been a growing interest on the phase behavior of biomolecules, especially after demonstration of its biological implications such as reversible formation/dissociation of membrane-less cellular organelles. Several model systems have been discovered and studied, and one of crucial questions in the field is how the phase behavior is encoded in a sequence. Inspired by observations on a subset of disordered proteins that apparently exhibit a rather simple molecular grammar for phase behavior, we developed the *stickers-and-spacers framework* adapted from the field of associative polymers for understanding how multivalent protein and RNA molecules drive phase transitions that give rise to biomolecular condensates. In this talk, I will introduce the framework and discuss its applications in explanation and prediction of biomolecular phase behaviors.