

Competition Corner: Constrained Arguments

g11_u07_w28

Original fictional data challenges. No material action, design, or real-world decision is implied.

Challenge 21. Fictional cards R and S each have a listed transition property: 55 ± 4 and 66 ± 3 units. R is labeled molecular and S network. Write both intervals, compare them, and form the strongest bounded claim. Then give two alternative explanations or missing controls that prevent a universal structure-to-property conclusion.

Challenge 22. A fictional table gives T: nonzero dipole, lower listed transition; U: zero net dipole, higher listed transition. Construct two competing explanations that include mass, shape, packing, polarizability, or conditions. Propose one additional paper-data column that would help distinguish them.