Showcasing research from Professor Reyes' group, Department of Chemistry, Universidad Nacional de Colombia, Bogota, Colombia.

Watch out electrons!: positron binding redefines chemical bonding in Be_2

Building on previous studies showing that a positron can stabilize repelling anions *via* positron bonds, this work reveals that a positron can also bind two weakly bound neutral atoms. The binding arises from an exotic mechanism: upon positron attachment, the dimer's electronic structure becomes repulsive at all internuclear distances. The positron stabilizes this repulsive system through two distinct mechanisms - forming a positron bond at long internuclear distances and, near equilibrium, through an unusual accumulation of positron density in the outer internuclear region.

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As featured in:

See Andrés Reyes *et al., Chem. Sci.*, 2025, **16**, 22322.

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