

STUDENT: **What magnetic character do triplet O₂ have?**

TEACHER: ⇨ paramagnetic

STUDENT: **In experiments, a bridge of what element can be built between poles of a magnet?**

TEACHER: ⇨ Liquid oxygen

STUDENT: **The spin of what can produce a magnetic effect to oxygen molecules?**

TEACHER: ⇨ unpaired electrons

STUDENT: **What kind of field is necessary to produce a magnet effect in oxygen molecules?**

TEACHER: ⇨ magnetic field

STUDENT: **What device is used to test the magnetic attractions involved in liquid oxygen?**

TEACHER: ⇨ powerful magnet

STUDENT: **What are O molecules in triplet form?**

TEACHER: ⇨ CANNOTANSWER

STUDENT: **Why are O molecules paramagnetic?**

TEACHER: ⇨ CANNOTANSWER

STUDENT: **What is attracted to the poles of a powerful magnet?**

TEACHER: ⇨ CANNOTANSWER

Section:Oxygen24

Context: In the triplet form, O₂ molecules are paramagnetic. That is, they impart magnetic character to oxygen when it is in the presence of a magnetic field, because of the spin magnetic moments of the unpaired electrons in the molecule, and the negative exchange energy between neighboring O₂ molecules. Liquid oxygen is attracted to a magnet to a sufficient extent that, in laboratory demonstrations, a bridge of liquid oxygen may be supported against its own weight between the poles of a powerful magnet.[c] CANNOTANSWER