



# Being Knotty

In the image below, no two rings are linked to one another, yet the three rings, called *Borromean rings*, stay together. They are a part of a field of mathematics known as knot theory and are especially interesting because of this apparent paradox, which can be extended to more than three rings. Nice, but are they good for anything? Yes. The rings also offer challenging targets for synthetic chemists who create molecules with the same geometric and spatial properties. In physics, there are quantum states that are physical manifestations of the rings.

These states were predicted about 50 years ago and have recently been experimentally confirmed. Borromean rings— intriguing shapes with no application? KNOT!



Image: Borromean Rings—Glass, by Rinus Roelofs, [www.rinusroelofs.nl](http://www.rinusroelofs.nl)

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