

The News Matrix

The day at a glance

SCIENCE

Knot is the nine o'clock news

Scientists have fashioned the world's tightest knot. Chemistry researchers at the [University of Manchester](#) pioneered a way of braiding strands of molecules to make the tightest and most complex knot ever produced. It has the potential to create a new generation of advanced materials. **PAGE 11**

SCIENCE

Braided molecule becomes tightest knot ever known

By Dean Kirby
NORTHERN CORRESPONDENT

Scientists are celebrating entering the Guinness Book of Records for fastening the world's tightest knot.

Researchers at the [University of Manchester](#)'s School of Chemistry pioneered a way of braiding multiple strands of molecules to make the tightest and most complex knot ever produced. It is hoped the technique could be used to make tougher and lighter materials.

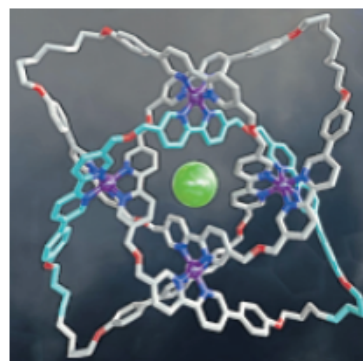
Professor David Leigh, who led

the research team, said: "I grew up watching Roy Castle and the McWhirter twins on the TV programme *Record Breakers*, so I know that my nine-year-old self would be particularly proud of this achievement.

"Dedication is what you need if you want to be a record breaker."

The breakthrough knot has eight crossings in a 192-atom closed loop – which is about 20 millionths of a millimetre.

It means scientists should be able to probe how knotting affects



The molecular braid developed by Professor David Leigh's team

strength and elasticity of materials, which in turn will enable them to weave polymer strands to generate new types of materials.