MAKING MAGNETIC LIQUIDS IN THE LAB

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A team of Scientists in California have created magnetic liquid drops for the first time.
Image from pixabay

We are used to seeing magnets as solids, usually objects that are half blue and half red, with a North and South pole at either end. However, there are a group of materials called ferrofluids, which contain iron oxide particles in a liquid **suspension**. These are **temporarily** magnetic, when brought near to other magnets. These have been around since the 1960s and have been used in objects where it is useful to be able to change their 'stickiness'. They are found in computer hard drives, loudspeakers and even MRI machines (a type of medical imaging).

Now a group of scientists at Lawrence Berkeley National Laboratory in California appear to have created **permanently** magnetic liquids for the first time. The difference between temporary and permanent magnetism is that permanent magnets keep their magnetic properties all the time, whereas temporary magnets only have magnetic properties when they are in proximity to another magnet.

Scientists are excited about this new development because of the **potential** of this permanent magnetism. It could open up new avenues for electronics and robotics, and possibly even for creating artificial cells or delivering drugs to different areas of the body. There may even be a possibility that they could be used to **propel** small satellites.

Answer the following questions in full sentences:

1. What is this news story about?

2. The word 'ferrous' generally means 'containing iron'. What do you think a ferrofluid is?

3. What are ferrofluids used for?

4. What use might this research be for future engineering and science?

5. Write down the meanings of any words **in bold** in the article.