

Raman Research Institute (RRI)

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About Raman Research Institute (RRI):

- It is an **autonomous research institute** engaged in **research in basic sciences**.
- **Location: Bangalore**
- The institute was **founded in 1948** by the Indian physicist and **Nobel Laureate Sir C V Raman**, with **funds from private sources**.
- It was restructured in **1972 to become an aided autonomous institute receiving funds from the Department of Science and Technology** of the Government of India.
- The institute is **administered by a Governing Council**.
- Today, the **main areas of research** at the Institute are Astronomy & Astrophysics, Light & Matter Physics, Soft Condensed Matter, and Theoretical Physics.

What is Quantum Technology?

- It is based on the **principles of Quantum mechanics** (including **quantum entanglement and quantum superposition**) developed in the early 20th century to describe nature at the scale of atoms and elementary particles.

- **Quantum entanglement** is known to be the **exchange of quantum information between two particles at a distance**, while **quantum superposition** is known to be the **uncertainty of a particle (or particles) being in several states at once** (which could also involve the exchange of quantum information for a particle that is known to be in several locations simultaneously).
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Q1) What is Raman Spectroscopy?

Raman Spectroscopy is a non-destructive chemical analysis technique which provides detailed information about chemical structure, phase and polymorphy, crystallinity and molecular interactions. It is based upon the interaction of light with the chemical bonds within a material.

Source: [Navy partners with RRI for quantum-based secured communication system](#)

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