

Raman Research Institute (RRI), Bengaluru

We all read about Sir C.V. Raman's Nobel-winning Raman Effect, a fundamental discovery about light, in the previous magazine issue. But his genius extends beyond that. He also founded the Raman Research Institute (RRI) in Bengaluru in 1948, creating a vibrant hub where his legacy lives on. RRI continues his tradition of hands-on, curiosity-driven science. Today, RRI stands as a hub where students, researchers and scientists work together to explore the secrets of the universe.



Exploring the Universe, One Discovery at a Time

Since 1972, RRI, an autonomous institute supported by the Indian Government, has been a leading hub for physical sciences.

- **Astronomy & Astrophysics:** Fascinated by black holes and galaxies? Scientists here study radio waves from space, exploring pulsars, the Milky Way, and cosmic background radiation.

- **Light & Matter Physics:** They delve into how light interacts with materials, including quantum optics. RRI notably demonstrated quantum key distribution, a super-secure messaging method using quantum physics, vital for future cybersecurity.
- **Theoretical Physics:** This team uses math and logic to understand concepts like quantum gravity and general relativity, foundational for technologies like GPS and space travel.

Global Reach, National Impact

RRI's achievements span various fields, from pioneering **radio astronomy** in India to making significant discoveries in **soft condensed matter research** (like liquid crystals). They also develop advanced instruments, contributing to national projects like **LIGO-India**.

The institute collaborates with top national (IISc, TIFR) and international (Cambridge, MIT) organizations, promoting advanced research and interdisciplinary innovation. RRI upholds Raman's experimental tradition, preserving his instruments and research. Pure science at RRI, driven by curiosity, continues to lead India's scientific progress.

