

Indian Scientist

Nautam Bhagwanlal Bhatt

The Visionary Shaping India's Defence Technology



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Imagine building technology that helps detect hidden threats and protects a nation. This was the kind of work Nautam Bhatt dedicated his life to as a key scientist in India's defence research.

A Foundation in Brilliance

Bhatt wasn't just any scientist; he honed his skills under the guidance of giants. He earned his master's in physics from the Indian Institute of Science (IISc) under Nobel laureate C.V. Raman. His quest for knowledge then led him to MIT in the US, where he earned his doctorate focusing on wave theory and acoustics.

Architect of Defence Institutions

After returning to India, Bhatt immediately plunged into nation-building. He didn't just teach, he built!

- **Pioneering at IISc:** He became the first acting head of the Electrical Communications Engineering Department at IISc, shaping future generations of engineers.

- **Defence Science Laboratory (Delhi):** A key figure in its creation, setting the stage for India's indigenous defence research.
- **CEERI (Pilani):** From 1953–1957, he worked tirelessly to establish the Central Electronics Engineering Research Institute, a hub for cutting-edge electronics.
- **DRDL (Hyderabad):** He spearheaded the organization of radar research in Delhi, which later evolved into the Defence Research and Development Laboratory.
- **SSPL (Delhi):** As the founding director of the Solid State Physics Laboratory from 1962 to 1969, he led groundbreaking work in:
 - a. Producing high-purity silicon.
 - b. Developing solar cells and lasers.
 - c. Creating other vital semiconductor devices.

The Secret Weapon: VT Fuse

Among his classified contributions was his crucial role in developing the VT Fuse. It was a game-changer! Unlike older fuses that required direct impact or precise timing, the **VT Fuse** (or "variable time fuze") used radio waves to automatically detonate a projectile when it came within a certain distance of its target. This significantly increased the effectiveness of artillery against moving targets like aircraft in the 1960s, a vital step in bolstering India's air defence.

For his monumental contributions, Nautam Bhatt was awarded the **Padma Shri in 1969**. His dedication laid the groundwork for many of India's current defence technologies, making him a true hero of Indian science!