

TACC Limited and CRRI Collaborate to Revolutionize Indian Infrastructure with Graphene-Enhanced Pavements

National, 13th August 2025: TACC Limited has signed a Memorandum of Agreement (MoA) with the Central Road Research Institute (CRRI), a constituent of the Council of Scientific and Industrial Research (CSIR), to pioneer a transformative chapter in India's infrastructure journey with graphene-enhanced pavements powered by TACC's next-generation graphene-based additives. This initiative is first-of-its-kind in India, that promises to redefine how roads are built, while driving the nation closer to its national and global sustainability goals.

The MoA has been ceremoniously signed in the presence of Professor Manoranjan Parida, Director CRRI; Dr. Ambika Behl, Project Lead CRRI; Mr. Riju Jhunjhunwala, Director TACC; and Mr. Ankur Khaitan, MD & CEO TACC, marking the formal commencement of this visionary collaboration.

By combining TACC's cutting-edge graphene additive technology with CRRI's deep expertise in concrete and asphalt pavement engineering, this partnership aims to:

- Infuse graphene's remarkable properties into Indian pavements, both rigid and flexible, to deliver **stronger and more durable roads**
- Minimize binder usage, thereby **lowering carbon emissions** and aligning with **India's Net Zero vision**

This alliance is set to catalyze the evolution of next-generation, high-performance, and sustainable road infrastructure, ensuring that India's infrastructure framework is not only built to last but also built for the future.

Mr. Ankur Khaitan, MD & CEO, TACC Limited, said "This collaboration marks a defining moment for both infrastructure and materials science sectors in India. For decades, road construction has relied on incremental improvements, but the introduction of graphene represents a generational leap in durability, performance, and sustainability. Our partnership with CRRI ensures that cutting-edge research is translated into real-world impact, building roads that last longer, require less maintenance, and significantly reduce environmental footprint. This is not just an advancement for TACC, but a contribution towards India's vision of modern, resilient, and eco-friendly infrastructure."

Dr. Ambika Behl, Project Lead, CRRI, said "Graphene-based pavements are not just a scientific curiosity, they are a vision of the roads of the future: stronger, smarter, and more sustainable. By embracing this innovation, we can transform our infrastructure from a constant burden into a resilient backbone for our economy and society. The use of nano materials like graphene in road construction can help us tackle long-standing durability challenges while supporting the country's environmental goals. CSIR-CRRI's work with TACC will generate real-world results and pave the way for adopting such technologies at scale across Indian road network."

Graphene, a single layer of carbon atoms arranged in a hexagonal pattern is renowned for its extraordinary strength, superior conductivity, and light weight. With proven applications across electronics, energy storage, coatings, composites, construction materials, and textiles, graphene will now power a new generation of Indian roads. With this collaboration, TACC is positioning graphene as a strategic enabler in India's journey towards resilient, efficient, and climate-conscious infrastructure, complementing national initiatives like PM Gati Shakti and India's 2070 Net Zero emissions.

About TACC

TACC Limited, an innovation-driven venture of the LNJ Bhilwara Group, is a key player in the advanced materials sector, specializing in synthetic graphite and graphene derivatives. With a strong commitment to green technologies and sustainability, TACC continues to push the boundaries of graphene synthesis and its diverse industrial applications.
www.tacclimited.com

About Central Road Research Institute (CRRI)

Central Road Research Institute (CRRI) is a premier national research laboratory established in 1952 under the Council of Scientific and Industrial Research (CSIR), Ministry of Science & Technology, Government of India. Located in New Delhi, CRRI pioneers R&D in areas such as roadway and runway design, pavement evaluation, traffic planning, slope stability, landslide control, and road safety. Additionally, it offers technical consultancy and conducts national and international training programs in highway engineering. <https://crridom.gov.in/>