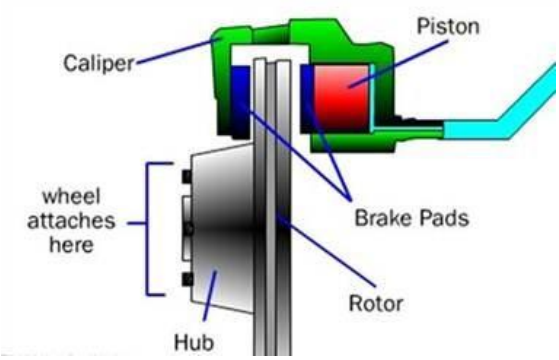
PRESS RELEASE

THE COBRA PROJECT NOW UNDER WAY: BREMBO, ITALCEMENTI, MARIO NEGRI INSTITUTE AND CIAOTECH/PNO WORKING TOGETHER ON THE BRAKES OF THE FUTURE

What will the brakes be made from on our cars of the future?
The answer to this question could even include elements in innovative cement, according to the researchers of the **Cobra Project**, a pioneering advanced research initiative funded by the EC **LIFE+** programme and conducted by **Brembo**, the world leader in the design, development and production of braking systems, in collaboration with **Italcementi** - one of the world's leading cement producers - through its technical research centre CTG, **the Mario Negri Institute**, which is specialised in biomedical research and studying the impact of pollution on health and the environment, and **CiaoTech** S.r.l. of the **PNO Group**, a company specialised in supporting process for innovation and technological transfer, and evaluating environmental impact.

The **Kilometro Rosso** science and technology park, founded to stimulate technological research, development and innovation through the creation of interdisciplinary and multi-sector collaborative networks, is home to three of the four partners in the project (Brembo, Italcementi and Mario Negri Institute).
Cobra is a testimony to how cross-pollination between completely different organisations can act as impetus for innovation.

Today, braking systems consist of a number of main elements: namely, the calipers, discs and brake pads. **Pads**, which are designed to withstand the braking forces generated by the caliper and the high temperatures produced by friction, are usually made from thermosetting phenolic resins with other strengthener and filler compounds.



The goal of the Cobra Project is to draw from and combine the know-how of leading companies in the braking and cement sectors to develop **innovative brake pads** which will improve the environmental performance of the braking system even further through the use of elements in cement-based materials.

The previously unexplored potential of these technologies, together with the talents of researchers engaged in the ceaseless pursuit of innovative systems and materials, have given shape to this **prototype development project** exploring the use of a **special water based mixture**, consisting in part of innovative **cement materials**, as the basis for the production of pads and, as a result, for the development and manufacture of next-generation braking systems.

Using an innovative cement-based material could in fact reduce the energy consumed to produce the raw materials by around an astonishing 90%, and reduce water consumption by 95%.
The project will also assess the environmental impact of the different materials used.

The project, which began a few months ago, will keep **41 researchers** from different fields engaged for the next **four years**.
The Cobra Project is pushing back existing frontiers of research and exploring new frontiers with the combined expertise of leaders in braking systems, cement and biomedical research, which have brought their **most advanced scientific and technological capabilities** to bear to evolve the existing production process and develop and realise these new pads.

This research initiative was selected by the **European Community** to receive a grant of **€1.48 million** through the **LIFE+** programme. This significant contribution adds to the investments - in terms of both direct funding and research activities - dedicated to the project by the partners, for a **total cost of the project of €3.8 million**, testifying to how our **businesses** are themselves **centres of advanced and applied industrial research**.

info@cobralifeproject.eu