

Next-Generation Graphene: Manufacturing and Innovative Applications

Alba Centeno

Graphenea, Paseo Mikeletegi 83, San Sebastian, Spain
a.centeno@graphenea.com

Graphenea has emerged as a global leader in the production and manufacturing of CVD graphene products and devices. This presentation will highlight the latest technological advancements and business opportunities for graphene as a key platform for future biosensing and photonic applications.

The discussion will cover state-of-the-art technologies for graphene production on a 200mm wafer scale, ensuring scalability, uniformity, and reproducibility. In recent years, Graphenea has achieved significant progress in developing graphene-based biosensors, establishing them as a versatile platform for rapid, reliable, and cost-effective diagnostic testing on a large scale. These developments demonstrate graphene's remarkable flexibility, sensitivity, specificity, ease of use, and the rapid response of Graphene sensors, outperforming conventional techniques and achieving attomolar-level sensitivity [1,2].

References

[1] Silvestri et al., *Nanoscale*, 15, (2023) 1076-1085

[2] Pannone et al., *Nature* 634, (2024) 572–578