



ABSTRACT

CTECHnano.

Innovating with ALD solutions.

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1. The company

CTECHnano is working in the field of thin-film coatings. We are experts in Atomic Layer Deposition (ALD). CTECHnano collaborates with its customers to provide coating processes development services and tools to implement the mentioned processes.

CIC nanoGUNE promoted the creation of the company together with two industrial companies: ADDED VALUE SOLUTIONS and CADINOX. CIC nanoGUNE contributes with its facilities and the support of the Ikerbasque Research Professor Mato Knez, head of nanomaterials research group at the center. ADDED VALUE SOLUTIONS and CADINOX have broad experience in design, manufacturing, testing and delivery of equipment for scientific and industrial applications.

2. ALD Technology

Atomic Layer Deposition (ALD) is a thin-film deposition technique based on the sequential use of a vapor (gas) phase chemical process. A wide variety of materials can be deposited by ALD, such as metals, oxides, nitrides, carbides, sulfides, fluorides, biomaterials, polymers, and other organic materials. Typical applications of ALD contain a requirement to manufacture very precise, pinhole-free and totally conformal functional thin-films. ALD coatings provide excellent adhesion due to the chemisorption of precursors with the surface.

Typical applications of thin ALD coatings are:

- encapsulation layers for PV cells or LEDs.
- anti-reflection and anti-scratch optical coatings for glasses or windows.
- electrodes and dielectrics for semiconductors.

3. Starting from knowledge, collaborating for innovation

Today, most of the companies are facing strong competitiveness. They are looking for competitive advantages. Many of them are addressing their efforts to innovation. CTECHnano is offering his knowledge about ALD to assists them to find innovative solutions.