

Mass production atomic layer deposition system

- Are you worried about the product yield and quality of the PVD process?
- Is the high price of ALD systems prohibitive for you?
- Overcome the obstacle of high prices and set sail with the Aries series!
- At. Precis. Combine multiple R&D engineers with more than 10 years of equipment experience!
- Let you enjoy the 15 million level noble ALD equipment at the lowest price!
- Let us join hands to embark on the road of low-cost, high-quality film!



Figure 1. Dimensions of A2-TB series model of Atomic Precision Company.

A revolutionary new choice for the traditional coating industry:

- At. Precis. Expert R&D Team.
- Developed exclusive anti-scratch coating design.
- Breaking through the technical limits of high unit price ALD equipment.
- Create new ALD Conforiso™ Aries technology.

Aries A2TB20 product features:

- (1) Normal temperature/low temperature vacuum coating: It is not limited by temperature and can be coated at normal temperature or low temperature to protect material properties.
- (2) 3D structure coating conformal coating: suitable for various complex three-dimensional structures to ensure uniform coverage and maintain shape integrity.
- (3) Precise control of ultra-thin thickness: It can accurately control the thickness of the film, achieve ultra-thin film coating, and improve product performance.
- (4) High coverage and high density: High coverage and high density ensure that every surface is evenly coated, improving product quality and stability.
- (5) Compatible with large-scale production: suitable for large-scale mass production, improve production efficiency, reduce costs, and meet market demand.

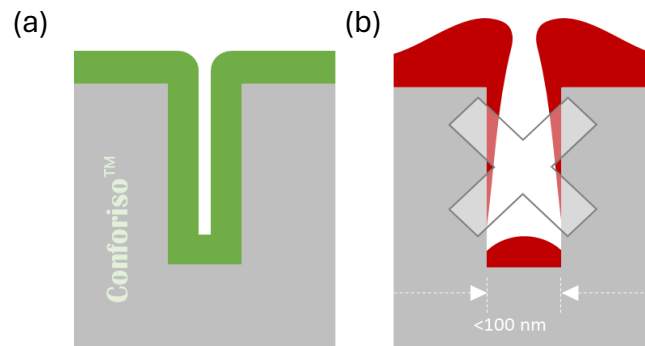
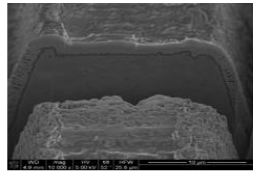
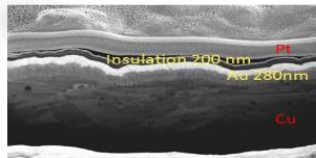
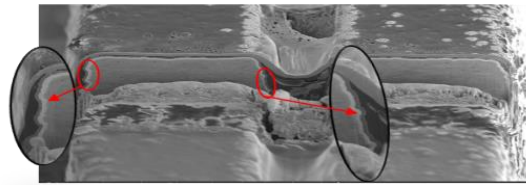
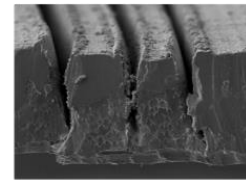
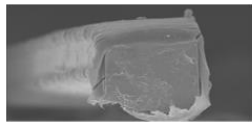
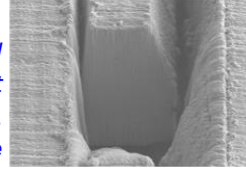


Figure 2. Film layer conditions in different processes (a) ALD process; (b) PVD and CVD processes.



Perfect film formation on rough interface.

With 3D complex structure and narrow spacing, it has high aspect ratio and good density performance, and can perfectly maintain the shape of the coating.



The film layer can have close and good contact with the metal layer.

Figure 3. ALD process applied to coating of deep trench samples.

The semiconductor foundry industry fully introduces high-efficiency ALD technology to improve film quality and product yield.

With the development of science and technology, the semiconductor industry has entered the era of shrinkage. However, in the face of increasing requirements for film quality, under the development of traditional coating technology, the commonly used physical vapor deposition (Physical Vapor Deposition, PVD) or plasma enhanced chemical vapor deposition (PVD) methods are commonly used. Plasma-Enhanced CVD, PECVD) is difficult to meet the challenges of the miniaturization trend. Driven by the strong market, atomic layer deposition (ALD) technology has become the rising star of the traditional coating foundry industry, bringing new improvements to product quality and yield.

However, ALD has limitations such as slow production speed, high cost, and difficulty in expanding production scale. Therefore, although ALD has significant advantages in related

fields applied to high-quality films, it has low process temperature, high film quality, and excellent coating uniformity. , almost 100% step coverage capability and reliable coating thickness control, but it is still unable to be directly applied to mass production applications of traditional OEM coatings. Against this background, many domestic foundries and equipment manufacturers have difficulty finding suitable solutions when faced with ALD-related problems with high technical content, or the cost of the solution is too high and does not meet commercial development needs.

Atomic Precision Co., Ltd. joins hands with CHD TECH to provide more advanced, more efficient and low-cost solutions. Through technological innovation and integration of materials and equipment, it provides customers with one-stop service, from material development to manufacturing process. The equipment fully meets the needs of OEM coatings to cope with the increasingly stringent requirements of the market.

In addition to its excellent performance in the traditional coating industry, the Aries series of products developed by Atomic Precision Company is a multi-functional mass-production atomic layer coating model that can not only show its talents in the era of miniaturization, but also enter other fields. Industrial needs, such as micro-LED, compound semiconductor fields and micro-small components. Such multifunctional models can make your production more flexible and efficient. No matter how the market changes, our products can cope with various challenges and expand more diversified market possibilities for you!

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