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Clean room engineers' exchanges: a win/win international collaboration

David Bourrier^{1*}, Ayako Mizushima², Naonobu Shimamoto², Etsuko Ota²,
Hugues Granier¹ and Yoshio Mita²

¹ LAAS-CNRS, Université de Toulouse, CNRS, Toulouse, France

² The University of Tokyo; 7-3-1 Hongo, Bunkyo-city, Tokyo, Japan

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Abstract:

In the world of research, international collaborations between researchers are common, well-structured, and benefit from a lot of funding. Exchanges between engineers/technical staff in general are rarer, it is difficult to find dedicated funding

Through the opportunity offered to two engineers of LAAS-CNRS by Professor Mita of the University of Tokyo, supported by MEXT X-nics UTokyo Agile-X project, we will show that these exchanges are an opportunity for real scientific and technical collaborations; and that as such they deserve to be developed.

The exchange focused on two aspects. The training and transfer of skills by the LAAS-CNRS in the field of electrolytic deposition, on equivalent equipment of the Yamamoto-MS company for the engineers of the Mita Lab, d.lab Platform Device Research Division. The discovery and the learning from the Mita Lab of a new technology of conformal seed layer deposition by supercritical CO₂^[1] deposition to study its feasibility and its transfer to the LAAS.

We will present the very good preliminary results obtained in only 15 days as well as all the benefits brought by this exchange; as well on the technological, scientific and humanly. They will benefit the whole community of the two laboratories and will allow to accelerate new scientific results.

These international exchanges allow us to confront and enrich different and complementary visions of how to implement technologies. Which is all the more enriching and motivating for the evolution of ways of working and exchanging. We hope that our presentation will create other opportunities, and show the real interest for our supervisory bodies to organize this type of opportunities beneficial to the whole scientific and technological community.

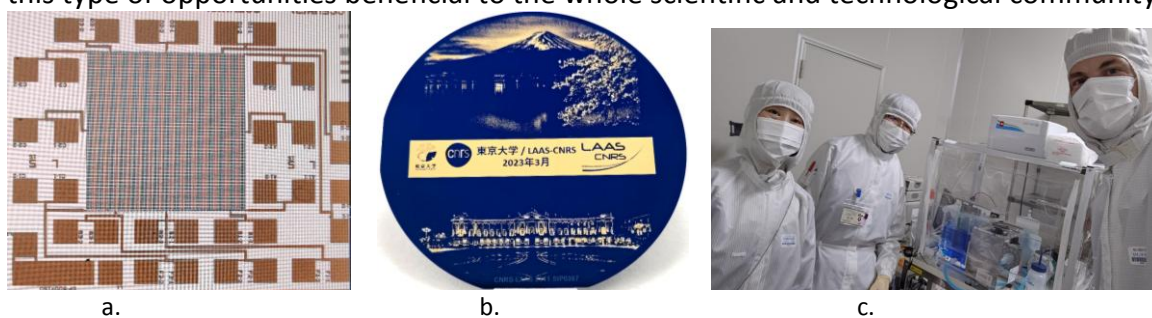


Fig. 1. a. 0.5 μm of copper electroplated on chip b. wafer Si₃N₄ 80 nm + Au 100nm c. Japanese-French electroplating Team

References:

[1] Naoto Usamil, Etsuko Ota, A. Higo, T. Momose, Y. Mita, IEEE 32nd International Conference on Microelectronic Test Structures (ICMTS) 2019, Kitakyushu, Japan.

Corresponding author: Bourrier David (bourrier@laas.fr) LAAS-CNRS 7 avenue Colonel Roche 31077 Toulouse

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