



## Successful Partnership Between Integran Technologies USA Inc. and the Pennsylvania NanoMaterials Commercialization Center

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Integran Technologies USA strives to be a world leader in advanced metallurgical nanotechnologies using its advanced process & product design solutions to foster R&D, material sales, contract manufacturing and technology licensing. Integran USA has key nanotechnology licenses from Integran Technologies Inc., which has been at the forefront of metallurgical nano-technology development for over twenty years. Integran Inc. developed the first large scale structural applications for nano-structured materials in the award-winning Electrosleeve process for nuclear steam generator repair and has been granted one of the earliest issued US patents in the field of nanotechnology. Since that time, Integran has established an international reputation for excellence in materials technology development and commercialization. Integran owns the intellectual property rights for the cost-effective production of metallurgical nano-structures with over 100 patents dealing with the structure, composition, processing and application of its revolutionary materials.

The Pennsylvania NanoMaterials Commercialization Center (the Center), through funding support from the Air Force Research Laboratory at Wright Paterson Air Force Base, recently supported a project with Integran USA to establish a pilot scale plating line for the development of coaxially nano-metal coated wire products in Pittsburgh, Pennsylvania. More specifically, this technology allows the production of equivalent or superior strength wiring with reduced cross sectional size. This equates to:

- 1) reduced weight in aircraft wiring for significant energy savings
- 2) overall resource conservation
- 3) elimination of hazardous material alloying elements commonly used in some conventional high strength wire products (e.g., Be in Cu)

Although this project specifically targeted wire, the technology also has applications in the nano-metal strengthened of composites for other weight saving applications. As a result of the project with the Center, Integran USA is now in a position in Pittsburgh to offer both limited production and the ability to license this technology to the defense or commercial markets.

Proof of the technology concept and the subsequent scale up of the pilot production facilities to achieve weight savings in wire, is a direct result of the grant from the Center. The Center has support from the Department of Community and Economic Development for the Commonwealth of Pennsylvania and the Department of Defense, Air Force Research Laboratories at Wright Paterson Air Force base. For more information on PANCC, go to [www.pananocenter.org](http://www.pananocenter.org).