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## Testing new materials ideas in optical research is getting easier & cheaper

Today, testing new materials ideas in optical research may be much easier than many people think and very useful for a variety of optical applications. New materials play the key role for the innovation in many optical applications that are widely used in many aspects of our daily lives, such as cell-phone, TV, solar panels, energy saving windows, Laser, optical communications. The materials research efficiency was significantly improved by the technologies, as Moore's law predicted faster, cheaper, more powerful solutions with time. Today testing new materials is so convenient and affordable, just like ordering a simple metrology test; Due to advanced and user-friendly software, the knowledge barrier for materials research is significantly reduced for most engineers too. Such low cost high efficiency technology could benefit more and more engineers for their research

and promote more research results. A newly designed high-efficiency low-cost PVD tool will be presented, and the high R&D efficiency in thin film optical coating workflow was demonstrated through three portions: materials generating, characterization and modelling, which combined with advanced optical product design and optical reverse engineering; For example, a series of new materials and their associated prototype products were quickly generated for an optical coating application and published at two international conferences, dozens of times cheaper and shorter than traditional thin film research to achieve those publications. More and more studies are expected to benefit from this convenient, affordable, and efficient materials research.

## Biography

Guowen Ding, CEO of Labforinvention Corp, a startup company providing World-Class thin film/materials research services at the Silicon Valley, USA. Dr. Ding was a former principal scientist who led a research group on energy-saving window coating to develop the future products for the world's leading company in this field (Guardian Industries) and achieved several world-class proto-type products on energy-saving window coating, and submitted more than hundred patent alerts from 2013 to 2016. Dr. Ding research interests are TCO, optical coating, energy-saving window coating and semiconductor applications. Dr. Ding received his Ph.D. from University of Wisconsin-Madison in USA; and B.E. degree from Tsinghua University in China.

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