

## Indian-owned UAE firm among top NASA nanotech award

A small United Arab Emirates (UAE)-based company owned by an Indian, that produces raw materials for the paint industry, is among this year's list of winners of a top nanotechnology award given by the National Aeronautics and Space Administration (NASA) of the US.

Gold Valley Chemical Company (GVCC), based in the emirate of Ajman in the UAE, figures among the 50 winners of the 2008 Nano 50 awards announced this month by Nanotech Briefs, the digital publication forum of NASA.

GVCC has been selected for developing a product that incorporates nanotechnology in its design and operation, 'with significant current or near-term commercial applications'.

According to GVCC president Adolph Dias, the product that his company has developed - Whitegold - significantly enhances the quality of titanium dioxide, a major chemical used in the paint industry.

'Titanium dioxide is a very expensive raw material which no paint manufacturer can virtually do without today,' Dias told IANS.

Stating that his company decided to enhance the performance of titanium dioxide so that the refractiveness of a paint was increased, he said: 'There were two ways to do it: one was to change the refractive index of the product and two, to do what we call the spacing of the product.'

'We chose the latter one because it was easier to do and it used a technology that we could bring into practice soon. The other one would take ages to do and I am not sure it will be commercially viable.'

Elaborating further, he said that the pigment or a paint film consists of a vast number of minute particles but there remains a void or space between these particles.

'In other words, in the pigment there is a void created by these particles and if those voids are correctly filled in and spaced out, the refractiveness of the paint increases... So what it (Whitegold) does is these nano particles fill in these voids and improve the final product,' he said, speaking at the GVCC factory in the Ajman Free Zone.

'Titanium dioxide on its own gives a high level of whiteness and opacity, but with our Whitegold, it improves its own performance. So, together with titanium dioxide, Whitegold performs in an unbeatable manner.'

The GVCC website describes Whitegold thus: 'Whitegold is a very pure, brilliant white, hybridized inorganic pigment providing excellent Titanium Dioxide extension possibilities. Its excellent opacity and unmatched brightness when used as an extender is just some of the outstanding properties of this product.'

According to Dias, the new product was developed by a small GVCC research team comprising six people who have with them around 20 years' experience in the paints industry.

As for the market Whitegold is targeted at, he said, 'The customer target is basically in the paints

and coatings market. It (Whitegold) is doing a function that no other raw material can do today. No known raw material is able to achieve the kind of opacity that our Whitegold has been able to render.'

Apart from Whitegold, Dias sounded equally excited about the company's latest product, which he believed would revolutionize the paints industry and market.

Called Kwickcoat, it is a paint that comes in powder form and is a do-it-yourself (DIY) product.

Explaining that any person can buy the product from the shelf of any paint shop, Dias, a chartered accountant by profession who got into paint raw materials distribution prior to entering manufacturing, said all that was needed to make paint was a glass of water.

'I will give you a raw material... one bag of raw material. You add that to this water, you stir it in and you have paint ready to apply. Believe it or not, it is as easy as that. It is easier than making tea or coffee because you don't even need to put the kettle on to warm up the water,' he said.

Armed with Whitegold and Kwickcoat and five other products that his factory located on the Ajman seaport produces, Dias is now thinking of GVCC's expansion and is actively looking for joint venture opportunities.

'We have the products that would create automatic demand. They are so unique that when a customer sees the properties and benefits that they can get from it, I will not need to sell it anymore,' Dias, who was born and brought up in [Mumbai](#) and moved to the UAE in 1978, said.

As for the kind of partners he was looking at, he said, 'We are not closing our eyes to anybody. We need somebody to share the vision that we have. It's a very broad vision, we have a very wide horizon... there is nothing to hold us back.'

All this even as he prepares to attend the NASA Tech Briefs National Nano Engineering Conference to be held in Boston Nov 12-13 when the Nano 50 awards will be presented for the fourth year in succession.

The awards, according to Nanotech Briefs, 'recognize the top 50 technologies, products, and innovators that have significantly impacted - or are expected to impact - the state of the art in nanotechnology'.

GVCC, along with another Japanese firm, are the only two companies outside of the Americas and Europe, to be selected for the awards this year.

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