

New Test: Nanotechnology-Based Nanolub Lubricant Significantly Reduces Gear Wear

New York, NY, April 23, 2009. ApNano Materials, Inc. (www.apnano.com <<http://www.apnano.com>>), a cleantech company and provider of nanotechnology-based products, today announced that new test conducted at the FZG Gear Research Centre of the Technical University of Munich, Germany, clearly shows that ApNano Material's nanotechnology-based lubricant NanoLub significantly decreases damaging wear pits on gear teeth. The test was done on oil that was formulated with a NanoLub additive.

“The test proves that NanoLub significantly enhances automotive and industrial gear oils, improving *pitting resistance*,” said Dr. Menachem Genut, ApNano Materials' President and CEO. “Gear teeth are especially *vulnerable* to micro-pitting and reducing this damage can save *high costs* of replacement and repair, making the gears operational 24/7. For Example, Anglo-American, one of the largest mining companies in the world has begun to use NanoLub in its heavy mining equipment in Chile.”

“The new test further enhances NanoLub's position in the automotive and industrial markets, opening new horizons for our innovative lubricant as a necessary additive to gear oils,” said Aharon Feuerstein, ApNano Materials' Chairman and CFO. “NanoLub is distributed worldwide in Europe, Asia and the Americas by local agents and distributors. Due to the large demand we have increased the capacity of our production plant.”

Oil blended with NanoLub was evaluated at the FZG Gear Research Centre according to a recognized international test procedure for investigating the influence of lubricating oil (especially the quality of additives in these oils) on the wear and damage of gears.

In such conditions, indications of damage appear as micro-pits or small holes on the surface of the gears. The test can differentiate between oils of varying quality and thus facilitates identifying a high quality lubricant additive that provides adequate resistance to pitting and wear.

The test at the FZG Gear Research Centre follows other tests done by Dr. Adrian Oila of Newcastle University, England, on gears with heavy duty gear oil that was blended with NanoLub powder. No wear damage to the steel lubricated with the NanoLub oil could be observed with an optical microscope, while significant wear was observed for the reference oil. The presence of a beneficial tribofilm was detected on the gears lubricated with the NanoLub formulation. The tribofilm continues to lubricate the moving parts also in cases where the oil supply is interrupted.

NanoLub, ApNano's proprietary nanotechnology-based lubricant, is based on nanosized particles of tungsten disulfide (WS₂) that have a structure of nested spheres, called inorganic fullerenes, whose lubrication mechanism includes the layers slipping off under loads to form an adherent film that reduces friction and wear. These new nano spheres have first been synthesized by Dr. Menachem Genut during his post doctorate research. When these particles are used as an additive to liquid oil or grease, NanoLub significantly

enhances the lubricating properties of the oil or grease with respect to wear and friction by an order of magnitude versus the same lubricant without this additive. In addition, NanoLub “wraps” the moving parts with a lubricating thin film called tribofilm and continues to lubricate normally for a long time, as an “uninterruptable lubrication source” during severe oil leakages. In addition to the significant reduction in wear, NanoLub also contributes to a considerable reduction in the friction between moving parts resulting in a smoother ignition in case of “cold start”, increased power, and to an improved fuel economy with lower emission of greenhouse effect gases.

About ApNano Materials

ApNano Materials (www.apnano.com) is a private nanotechnology company founded in 2002 by Dr. Menachem Genut, President and CEO, and Mr. Aharon Feuerstein, Chairman and CFO. ApNano Materials was incorporated in the US and is headquartered in New York, USA. Its fully-owned Israeli subsidiary - NanoMaterials, Ltd., is located in the high tech science park adjacent to the Weizmann Institute campus in Ness Ziona, Israel.

NanoLub, a green, environmentally friendly material, is a trademark of ApNano Materials, Inc.. NanoLub is European REACH compliant and has been pre-registered.