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Flexible Plastic Memory Endurance Testing

ASX listed Strategic Elements Ltd (ASX: SOR) is pleased to provide an update on the performance of the Nanocube Memory Ink technology. A drop coated flexible plastic prototype has been endurance tested and results show that data **was reliably stored** within the memory cell for 1000 cycles.

The Company believes that one of the positive characteristics of the Nanocube technology will be strong reliability. The equipment used to test the endurance of the prototype had a limit of 1000 cycles and **therefore the maximum limit of testing was achieved in the first round of testing.** Endurance testing can now be advanced to even greater limits.

The Company has completed its first round of endurance testing on the Nanocube memory technology. Endurance testing refers to tests typically done to find out whether a device can withstand the repeated writing/reading of data over a period of time under real world simulated conditions.

Endurance testing can assist to show the durability of the Nanocube technology under real world usage. The prototype is turned on and off over a period of successive cycles to determine the number of cycles memory cells can endure. Endurance testing is also vital to ensure that if memory devices are running complex applications it will be able to withstand repeated usage and maintain reliability over the duration of use.

The results from the endurance testing will advance further development. The Company is looking forward to further optimising the memory ink properties, exploring advanced plastic materials and also high technology glass materials to expand the commercial potential of the nanocube technology.

Further Developments

- In the short term the Company will focus on showcasing the unique advantages of the technology.
- The Nanocube memory ink will also be tested on **glass** materials for potential use in the infrastructure sector.
- Endurance testing will also be conducted over a larger number of cycles.
- Different materials from large companies such as Kodak (flexible plastics), Dupont (conductive inks) and Corning (glass) will be trialled to see which specific products enhance the performance of the memory ink even further.

Strategic Elements

ASX listed Strategic Elements Ltd operates under the Federal Government's Pooled Development Fund Program. Under this program the Company takes capital it raises through the ASX and invests it into Australian innovation. In return the Federal Government enables the Company's **shareholders to pay no capital gains tax** on their shares or tax on dividends. More information can be found on the Company's website at www.strategicelements.com.au.

The Technology

Low cost traditional printing processes combined with advanced inks and new forms of flexible materials and glass to put electronics where they could never go before e.g. wrapped around curved surfaces, attached to clothing or on building infrastructure.

The nanocube ink is made from cerium oxide and is comprised of billions of tiny cubes that are roughly 10 nanometres thick, or about 10,000 times smaller than the thickness of a sheet of paper. When placed in a solution and deposited onto a conductive surface, the cubes self-assemble: first they form a coordinated square array, then they stack on top of each other like Lego, building up layer by layer. Digital information (a series of ones and zeroes) is encoded and stored on the nanocube memory cells by applying an electrical current, which changes the cell between a resistive and conductive state.

License
ASX listed Strategic Elements Ltd 100% owned Company Australian Advanced Materials has an exclusive global licence for the technology from UNSW. It has also contracted the materials group at the UNSW School of Materials Science and Engineering to assist in developing a nanocube memory prototype, improving the technology and creating new intellectual property.

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