

New spinout will develop next generation of semiconductors

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A new company set up to revolutionise semiconductors is being launched today 1st July 2011 at the University of Warwick.

Anvil [Semiconductors](#), created by the University's technology commercialisation company, Warwick Ventures Ltd., will be developing smaller, more efficient power converters using innovative Silicon Carbide (SiC) power semiconductor switches.

The company has received an [investment](#) of £25,000 from Midven's Early Advantage Fund, as well as £125,000 investment from private investors Minerva, the Midlands network of entrepreneurs, venturers and angels. Since investment, the company has also been awarded a prestigious R&D grant from the Technology Strategy Board.

SiC devices are able to withstand higher voltages and currents and are 10 times faster than traditional silicon devices. However, they are also currently 10 times more expensive to produce, a factor which has prevented the material being widely adopted.

The semiconductors being developed by Anvil are expected to enable significant improvements in operating efficiency, size and cost when used in power converters such as those found in electric cars, photovoltaic cells and wind turbines. The market for these devices is estimated at \$25bn worldwide.

Anvil's technology has been developed by Dr Peter Ward (Anvil CEO)

and Professor Phil Mawby's team at the University of Warwick's School of Engineering. Anvil will be using five patents licensed from the University to refine and commercialise the devices. The company will also be the first private company to use the £10m semiconductor clean room funded through the Science City Research Collaboration.

Professor Mawby says: "Semiconductors have such a vast array of uses in electronic equipment. The technological advances we are introducing to their design have huge potential to reduce our overall energy consumption, through improving the efficiency of electric cars, renewable power generation and the Grid. Now Anvil gives us a route to get this technology to market".

Warwick Ventures' Business Development Manager, Kevin Marks says: "Two factors have stopped the introduction of [silicon carbide](#) into the market place: the cost of the substrate and the production of a high quality switch. Anvil's technology offers potential solutions to both these barriers".

Dr Andrew Muir, a director of Midven and Investment Director of the Early Advantage Fund, says: "Anvil builds on the impressive research track record of Phil Mawby and the substantial investment made in the Science City Cleanroom. Our investment, alongside the Minerva business angels, will support the progress of this business, which has great growth potential and the ability to become a world leader".

Anvil will be launching a further funding round later this year as the [company](#) moves towards producing prototype devices.

Provided by University of Warwick

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