THE AUSTRALIAN

The Innovation Challenge winner could change steel-making forever

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Professor Veena Sahajwalla, winner of The Australian/Shell Innovation award at the Museum of Contemporary Art in Sydney yesterday. Picture: Dan Himbrechts Source: The Australian

USING recycled rubber to revolutionise steel-making earned Sydney engineer Veena Sahajwalla the $30,000 top prize at The Australian Innovation Challenge awards in Sydney last night.

The technology - which was developed at the University of NSW - has already prevented more than 1.4 million tyres from becoming landfill, with the rubber, along with recycled plastic containers, partly replacing coke in generating power for the production of steel.

Dr Sahajwalla, who studied in India before completing a PhD at the University of Michigan, said the principles underlying her polymer injection technology to create an environmentally friendly steel industry could also be applied to other industries. The technology could cut power consumption by millions of kilowatt hours a year.

GRAPHIC: 2012 Innovation Challenge winners
(http://resources.news.com.au/files/2012/12/11/1226534/852937-121212-innovation.pdf)

"In the process of making steel you need an input of carbon which traditionally comes from coal-based resources," she said. "What we've shown is that you don't need to rely on the conventional materials, which has changed the paradigm of energy creation."

Editor-in-chief of The Australian Chris Mitchell said the competition had attracted hundreds of diverse and inspiring entries that highlighted often-uncelebrated work.

"If last year we were surprised by the enthusiastic response from the science community and entrants across the country, this year we are gratified our inaugural event was not a flash in the pan but the start of something meaningful," he said.

The innovation challenge had helped inventors to raise their profile to hopefully gain investment.

The challenge is run by The Australian in association with Shell, with the support of the federal Department of Industry, Innovation, Science, Research and Tertiary Education.

Ann Pickard, country chairwoman of Shell Australia, said large business had a duty to support research and development, which helped to eventually drive innovation in many industries.

"We, industry, academia and government all have a responsibility to harvest talent. Not just our finalists and winners, but beyond," she said. "The power of collaboration will define how successful we will be in addressing the challenges of the future."

UNSW's industry partner, Arrium, is using Dr Sahajwalla's technology in Australia, and has sub-licensed it to a plant in Thailand and is in talks with other overseas steel-makers.

Other entries included a folding flat-pack house; a DNA test that would help breed horns out of beef cattle; a wave energy converter; a computer program that allows students to conduct laboratory experiments on the internet: and do-it-yourself hearing aids.