Cite this article
Award winning paper in 2016.
Proceedings of the Institution of Civil Engineers – Waste and Resource Management **171(1)**: 31, https://doi.org/10.1680/jwarm.2018.171.1.31

Announcement

Waste and Resource Management

ice publishing

Award-winning paper in 2016

Papers published in *Waste and Resource Management* are eligible for awards from the Institution of Civil Engineers. Papers from any of the ICE journals can be nominated for several awards. In addition, each journal has awards dedicated to their specific subject area.

On Friday 6 October 2017, ICE president Tim Broyd presented an award to the following paper published in *Waste and Resource Management* in 2016. The editorial panel nominated their best papers and an awards committee chaired by Nigel Wright allocated the awards.

Thomas Telford Premium Prize

The Thomas Telford Premium Prize, presented for the best paper published in *Waste and Resource Management*, was awarded to Zhang *et al*. (2016).

Abstract

A novel process has been developed which enables the production of high-value carbon nanotubes (CNTs) and hydrogen-rich syngas from the two-stage pyrolysis–catalysis of waste tyres. The waste tyre samples originated from truck tyres and from car tyres. In addition, three of the main rubber elastomers used in tyre manufacture, polybutadiene rubber, styrene–butadiene rubber and natural rubber, were also investigated. The waste car tyres produced a syngas yield of 30·2 wt%, which was composed largely of hydrogen (53·8 vol%) with a calorific value of 18·8 MJ/m^3. Increasing the tyre:catalyst ratio increased the yield of hydrogen. The component rubber elastomers produced much higher yields of syngas and hydrogen gas concentration. The carbon deposited on the catalyst during reaction was found to be mostly composed of graphitic CNTs. Changing the process conditions in terms of tyre:catalyst ratio could increase the yield of the carbon deposited on the catalyst to up to 14 wt%.

Thomas Telford Premium prize winners Yeshui Zhang, Mohamad A. Nahil and Paul Williams with ICE president Tim Broyd (second from left)

REFERENCE

Zhang Y, Wu C, Nahil MA and Williams P (2016) High-value resource recovery products from waste tyres. *Proceedings of the Institution of Civil Engineers – Waste and Resource Management* **169(3)**: 137–145, https://doi.org/10.1680/jwarm.16.00001.