

DELHI

IIT-Delhi researchers develop technology to recycle e-waste

SPECIAL CORRESPONDENT

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To deal with one of the fastest growing waste streams, researchers at Indian Institute of Technology, Delhi have developed a zero-emission technology to manage and recycle e-waste to wealth, the institute said on Monday.

It said a team led by K.K. Pant and his research group in the Catalytic Reaction Engineering Laboratory at Chemical Engineering Department have adopted a methodology that uses e-waste as an “Urban Mine” for metal recovery and energy production. Researchers said using their method, e-waste is shredded and pyrolyzed to yield liquid and gaseous fuels, leaving behind a metal-rich solid fraction. On further separation using a novel technique, the leftover solid residue yields a 90-95% pure metal mixture and some carbonaceous materials. The carbonaceous material is further converted to aerogel for oil spillage cleaning, dye removal, carbon dioxide capture, and use in supercapacitors. The technology is an outcome of a

Department of Science and Technology, Government of India, funded project and developed technology will cater to the need of “Smart Cities,” “Swachh Bharat Abhiyan,” and “Atmanirbhar Bharat” initiatives of the government, IIT-Delhi said.

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