3D PRINTING DINOSAUR FOSSILS

MakerBot, Brooklyn, N.Y., introduced T-Rex Skeleton, an anatomically correct, scaled model of a full Tyrannosaurus rex skeleton. The T-Rex lived in North America more than 65 million years ago. The giant has long been a favorite of 3D modelers, but is difficult to sculpt and 3D print. In addition to the T-Rex skeleton, the company also introduced a T-Rex skull. Both fairly complex models showcase advanced sculpting and are geared toward education, functional use, and scientific content. The T-Rex skeleton model contains 19 files for a total of 79 pieces, which are numbered, labeled, and come with assembly instructions. makerbot.com.

Two new 3D printable models, a T-Rex skeleton and a T-Rex skull, were released by MakerBot. Courtesy of Business Wire.

CALCULATING THE STRENGTH OF SPIDER-MAN’S WEB

Spider webs are notoriously strong, with spider silk reported as having a tensile strength of up to 1.75 GPa. Carbon nanotubes (CNTs) are even stronger, handling 63 GPa or more. Though according to the 1986 Official Handbook of the Marvel Universe, Spidey’s webs are made of a nylon-like material that can support a measly 0.5 GPa. But can the strength of a specific material alone account for the properties of Spidey’s web? The structure of the web is also clearly important. But what is the web actually made of? One hypothesis is that the web may be made of carbon nanotubes. If so, we may see something Spidey-esque sooner rather than later. For more information: Suveen Mathaudhu, snmathau@ncsu.edu, ncsu.edu.

FIGHTING AIR POLLUTION WITH POETRY

Simon Armitage, poetry professor at the University of Sheffield, UK, collaborated with science professor Tony Ryan to create a catalytic poem called In Praise of Air—printed on material containing a formula invented at the university that is capable of purifying its surroundings. This inexpensive technology could also be applied to billboards and advertisements alongside congested roads to cut pollution. The 10 × 20 m (38 × 66 ft) piece of material that the poem is printed on is coated with microscopic pollution-eating particles of titanium dioxide, which use sunlight and oxygen to react with nitrogen oxide pollutants and purify the air. “This poem alone will eradicate the nitrogen oxide pollution created by about 20 cars every day,” says Ryan. For more information: Tony Ryan, t.ryan@sheffield.ac.uk, www.sheffield.ac.uk.