



Stuff Matters: Exploring the marvelous materials that shape our man-made world

by Mark Miodownik

Mark Miodownik has one sincere message: Stuff really matters.

Miodownik, a science communicator and materials science and engineering professor at University College London, echoes that message through his passion for materials in the book *Stuff Matters*.

The book is not an entirely technical nor comprehensive history, dissection, or explanation of materials, but rather an entertaining meander through the everyday world, exploring materials along the way. *Stuff Matters* is a good introduction to, or reminder of, the world of materials science by connecting stuff to its recognizable place in the world.

“The material world is not just a display of our technology and culture, it is part of us,” Miodownik reflects in the book. “We invented it, we made it, and, in turn, it makes us who we are.”

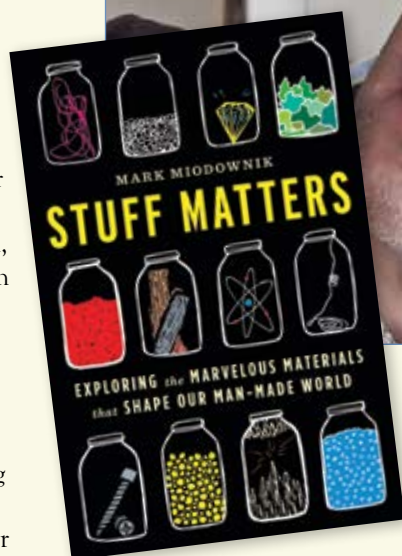
By directly connecting materials to our lives, the book becomes a compelling champion for the wonder and importance of materials. It removes the abstraction, instead inserting an emotional, personal connection to materials.

Miodownik uses a simple—yet carefully articulated—photograph of himself sitting on the rooftop of his flat to illustrate the wonders of 10 materials present in the photograph.

Miodownik writes in the book’s introduction, “For each [material] I try to uncover the desire that brought it into being, I decode the materials science



Mark Miodownik, author of *Stuff Matters*, examining stuff.



behind it, I marvel at our technological prowess in being able to make it, but most of all I try to express why it matters.”

Those 10 materials, each with a descriptor that doubles as chapter title, are steel (indominatable), paper (trusted), concrete (fundamental), chocolate (delicious), foam (marvelous), plastic (imaginative), glass (invisible), graphite (unbreakable), porcelain (refined), and a biomedical implant (immortal).

Miodownik continues in the introduction, “Each new chapter presents not just a different material but a different way of looking at it—some take a primarily historical perspective, others a more personal one; some are conspicuously dramatic, others more coolly scientific; some emphasize a material’s cultural life, others its astonishing technical abilities.”

Without being abstract, Miodownik explores the microscopic and macroscopic

world of materials science to explain why each material is unique—and special. To aid these explanations, the book is dotted with hand-drawn figures and diagrams, making the science accessible, the concepts clear, and the story overall entertaining.

In the end, Miodownik philosophizes about chocolate, reminisces with paper, and awes over ceramics. His enthusiasm and awe shine through the prose, making the book a light and easy read. Although the book meanders a bit, this style also plays into its informality—the reader almost feels as if she is sitting on the rooftop with Miodownik, letting him babble excitedly about each material around him.

Stuff Matters is an entertaining introduction to the utility of materials for anyone unfamiliar with materials science. For those more familiar, it is easy and entertaining, a good reminder of the field’s broad purpose, and an inspiration for how to effectively talk about materials science to nonexperts. ■