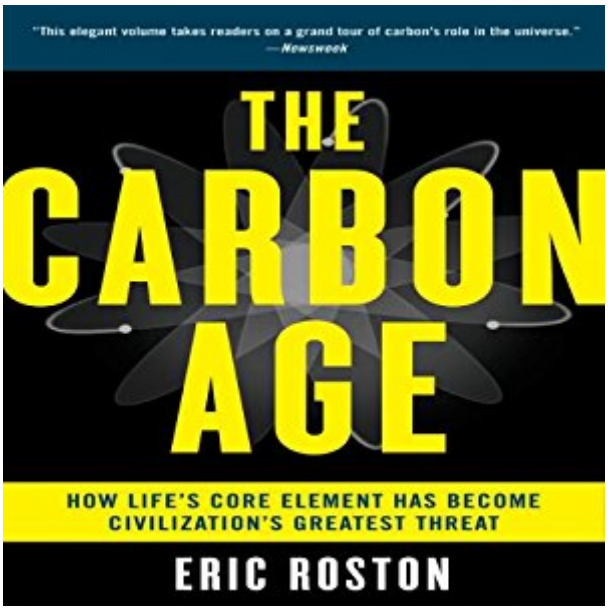
# The Carbon Age: How Life's Core Element Has Become Civilization's Greatest Threat



## Synopsis

What do bubbles in a soft drink, a bullet-proof vest, a plastic chair, and our DNA have in common? Carbon. It is, and forever has been, the ubiquitous architect of life and civilization, forming the chemical backbone of every living creature. And yet, when we hear the word today, it is more often than not in a crisis situation: Carbon dioxide emissions are destroying the ozone layer and warming the planet; the volatile Middle East explodes atop its stores of hydrocarbons; carbohydrates threaten obesity and diabetics. Carbon, thus, sustains us and threatens us in equal measure. Eric Roston illuminates this essential element in all its forms, cleverly recreating the intricate carbon cycle on the page by tracing its journey from the Big Bang to Earth and its extraordinary infiltration of this planet and, in time, influence on humankind and civilization. Evoking its ubiquity - more than 99% of all 31 million known substances contain carbon - Roston chronicles the ways we have used it, often to surprising, and sometimes to catastrophic, effect: Having sped up the carbon cycle in the last two centuries, we are now attempting to wrestle Earth’s geochemical cycle back from the brink. Blending the latest science with original reporting, Roston makes us aware, as never before, of the seminal impact carbon has, and has had, on our lives.

## Book Information

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## Customer Reviews

This book crams more information than a year of high school chemistry -- I hope that doesn’t sound dull.Roston does brings a chemistry perspective on things from the big bang to evolution to the auto.When it comes to implications for our future due to greenhouse gases, it can be daunting and despairing; but that’s the price for being informed.thanks Eric.

Understanding the carbon cycle and carbon’s basic chemistry are vital to understanding global climate change and energy issues. I love learning about these issues. Thus, I was excited for this book. The title and back cover made it sound like it was going to be an engaging read. I was sorely disapointed. The writing and editing were just awful--shockingly awful. Adjacent paragraphs that don’t belong together topically. Long random tangents throughout the book that the author fails to relate directly back to his thesis. (For example, in chapter 11 about biological fuels, a lot of information is discussed about basic genetics and the human genome project. Exactly why was never revealed and the chapter never presented in-depth info about biofuels.) The lack of a strong conclusion or forward-looking set of recommendations made the book end on a very unsatisfying note. These among other problems made for a less than spectacular read. I found myself skipping through big sections because I was so frustrated with the poor writing, both structurally and topically. One will obtain a better basic sense of the global carbon cycle from the Wikipedia entry than from this book. I don’t recommend it in the least.

Definitely not for the general reader, since it presupposes a certain familiarity with basic chemistry. For example, here’s a sentence not far from the beginning of the first chapter: " . . . a carbon nucleus and four hydrogen nuclei (or protons) fuse in a series of reactions that produce a new helium-4 nucleus and the original carbon-12 nucleus."Get it? Neither did I, my excuse being it’s well over twenty years since I cracked open a chemistry textbook. A brief overview of the field at the outset might have helped, although the author being a journalist by trade would naturally be averse to anything that might impede the flow of the narrative.Equally unhelpful was the general lack of illustrations -- not even a periodic table to show carbon in relation to its neighbors.It’s unfortunate, since I really wanted to learn something. I suspect the cover blurb tells it all, just not in the way the author intended. Roald Hoffmann, 1981 Nobel Laureate in Chemistry, writes: "The story of carbon is an exciting journey and Eric Roston is a super storyteller!" In other words, go get yourself a Nobel Prize and you’ll love this book.

This is an insanely smart book. The author has done his homework - there is more research in each sentence than I’ve ever seen in any other book that I would actually read. One .com reviewer complained that the book was not deep enough. That person missed the point. The Carbon Age is about the breadth of carbon’s influence in our world. The author dances from theoretical stovepipe to theoretical stovepipe - from the history of the Earth to the human genome to economics in the

post-industrial age, drawing parallels on every level and uniting them all. The overarching themes that he pulls out are not just about carbon. Roston's ability to make sense out of a world of information, with sharp insight and subtle humor, is what sets this book apart.More than the famed C element, this book is about the evolution of systems. That's why it's so useful. In each chapter, he broaches a new topic (first the creation of the Earth from galactic matter, then the origins of life on Earth, etc.) and provides an interesting history of how it all happened, how it all works. In every case, the system starts with a little thing - some space dust, a carbon molecule, a mutation in human physiognomy, an economic truism - and that little thing guides the development of something much bigger. The composition of somebody's DNA physically determines the shape and characteristics of the animal built around it. Teeny microorganism bodies build up on the ocean floor, gradually becoming a huge layer of carbon which we can tap for fuel zillions of years later. The variety, and yet the consistency, of all these factors sets the stage for us to finally understand our own human context.And what a doozie. When Roston gets to the part about modern humans, about the industrial revolution, about cars (how Daimler and Ford and Toyota have literally changed the world), it's mind-boggling. He shows how evolutionary principles merge with economic ones, with computer systems, with scientific research. He paints a big picture of how radically Earth's systems have changed in the last 150 years, something our limited lifespans have kept secret from us all this time. It's at once fascinating and terrifying. In a measured, apolitical way, Roston makes me fear for the future of my unborn children's planet. It's humbling to realize the unprecedented power that the human race exerts on our surroundings. And it's shameful how we have let our basest human nature have its way with them.It makes me want to plant a tree. I'll talk to it, get rid of my own carbon dioxide, it'll photosynthesize it, and pure oxygen will come out. Hey, it's not much, but I've heard that big changes are built from little changes. It's worth a shot.You should get this book.

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