

Foreword

Nanotech Pioneers provides an insightful look into the nanotechnology revolution, where it is going, and how it will impact us. And it introduces us to the fascinating cast of characters that are bringing it into existence.

Author Steve Edwards has been on the inside track of nanotechnology, as both a scientist and a journalist. Steve has identified the exciting technologies and intriguing players. Some of them are capturing the headlines, and many others you are not likely to hear about, but you will definitely want to know.

The nanotechnology revolution has similarities to the wild forecasts that accompanied the Internet craze, until the bubble burst, but it is very different. Nanotech effects the material stuff the world is made of, including things that make a lot of money, pharmaceuticals, cosmetics, polymers, precious metals, clothing, cars, fuels, steel, diamonds, DNA, cells, bones, blood, brains, computers, semiconductors, biosensors, computer screens, watches, lasers, space travel, pet food, kitty litter, and much, much more. And in each of these situations, nanotechnology has the potential to make money. A lot of money.

Steve Edwards has been a prominent scientific writer and conference organizer who has covered the many advances in material science and nanotechnology, and how they are affecting industry and commerce. I have been a speaker at many conferences where Steve was in attendance, and often a moderator.

I can recall discussions over lunch, or over coffee, at many of these conferences, with Steve and with the other conference attendees, and networking to keep track of the next major advance in technology, the latest scientific papers, the hot companies attracting venture capital, the people moving up, down, sideways or out of the industry. The big companies shopping for technology and applications, or spinning out companies.

Steve was there, listening to this tempo of the business as major advances in science and technology started spilling out of the labs and into businesses. Steve was taking notes and mapping out the trends, the people, the forecasts, and the cool technologies.

At these meetings appeared venture capitalists, economists and government officials, who debated the size of the emerging market, some saying it would be many billions, and some many trillions, of dollars.

In the midst of all these high-minded, breathtaking visions of the future, were entrepreneurs looking for capital, scientists looking for entrepreneurs, reporters looking for stories, consultants looking for consultees, and venture capitalists looking to invest.

Steve has, in this book, captured the spirit and the excitement and the intriguing personalities who have come together to create this new world of business and science. *Nanotech Pioneers* is a great way to see how interesting little ideas are turning into companies, some of which are bound to be the next IBM or Microsoft. And others will fade into obscurity.

Not much happens in burgeoning industries without entrepreneurial energy. What I really like about Steve's storytelling is he mixes accurate science with down-to-earth pragmatics and a real skill for describing the people, and the entrepreneurial network. Too many books and articles on nanotechnology are written by people who don't know the science, and therefore just repeat whatever the entrepreneurs are telling them. Steve, who has a Ph.D. in molecular biology, can separate the wheat from the chaff, and cull out the hype from the real promise. But you do not have to be at all technical to really enjoy this book. Whether or not you are technical, you will be exposed to many of the really cool technologies that are being enabled and impacted by nanotech.

It is interesting how inadvertency plays a role in thrusting people onto the scene of nanotechnology. This happened to me, and Steve has done a great job of capturing how a little thing can change your life and change an industry. I am the CEO of a company, Biophan, and a few years ago a scientist told me that nanotubes could solve some of the problems my company was seeking to solve. The next thing I knew, my company became one of the more talked about and successful nanotech companies. And just a few years later, I was sitting in a conference, listening to a speaker talk about the discovery of tiny little microtubules inside of a deposit of clay in a mine in Utah and, having gotten into a project using nanotechnology, I was attuned to the potential for nanotubes. They are usually made of carbon and created in labs. But here was a fellow describing a naturally occurring nanotube.

Sitting there, in that conference, I could envision dozens of uses and could see how a company could be formed to develop the means to separate the tubes from clay, and apply them to many new applications. I mentioned this to Steve, and explored the situation in depth. Now there is a public company, NaturalNano, pursuing this in earnest. I am an investor, and on the board of NaturalNano. And I am the subject of one of the vignettes in this book. Explaining how this all came about, inadvertently. And that is one of the things I really like about *Nanotech Pioneers*. Steve was there, as this industry has emerged, and watched many of the players reported on in this book run the gauntlet from start-up to success.

But beware, there are some hazards to reading further. The nanotech revolution is contagious, and there is risk you can get roped in! I recommend you hold this book at least six inches from your soul, because nanotechnology is compelling and contagious, once you get what it is about, and what it can mean to the world and to business.

I am fortunate, having been in the nanotechnology field for the past five years, to have met many of the people Steve reports on in *Nanotech Pioneers*, and to be familiar with many of the companies and technologies.

I am so pleased with the job Steve did, knowing – first hand – how successfully he has captured the facts, the promise, the people and personalities, and the excitement, that is driving this revolution.

I agreed to write this foreword, to encourage you to take this book home with you, or on your next business trip, and find out about something going on right around you, in every town and hamlet with a university or a research lab, that is truly going to change the planet and make many things much, much better – and some people much, much richer.

Michael Weiner

Founder and CEO of Biophan, Inc.

Founder of Natural Nano, Inc.

