

# Preface

*I wrote this book because I am an inquisitive physicist.*

*I had read of the potentially revolutionary reactor invented by Rossi and Focardi – better known as the "Energy catalyzer", or E-Cat – only a few days after its first public demonstration on January 2011 in Bologna. At first, I did not give too much weight to the idea, even though I wrote to Rossi to compliment him and give some tips on how to communicate such sensitive news to the public. But fate, evidently, had much more in store for me.*

*Quite unexpectedly, I was contacted a few months later by the co-founders of a cultural association operating in Viareggio to organize a major popular conference there on cold fusion, inspired by the novelty of the E-Cat. So, I also arranged a long interview with Sergio Focardi, one of the protagonists of the story that led Andrea Rossi to make the "quantum leap", and to invent the E-Cat in its current form. Moreover, this event allowed me to get to know many of the other people mentioned in this book.*

*More importantly, I was forced to significantly deepen my knowledge of the topic so as to be able to prepare the event in a professional way; I soon ended up by becoming passionately involved in it. An extra element I discovered right away was that, in the two decades following the announcement in 1989 by Fleischmann and Pons of "their" cold fusion – prematurely labeled as a "hoax" – this area of research, despite a thousand obstacles and prejudices, had begun to make great strides forward, independently of the validity or otherwise of the E-Cat.*

*The aim of this essay, therefore, is not to determine whether the E-Cat is an amazing product or the scam of the century – this verification and the scientific validation is only a secondary theme of the book, although it is treated in some depth – but to bring an understanding of how it works to all those who, like me, would like to try to replicate it.*

*When, more than twenty years ago, I enrolled in the Faculty of Physics at the University of Pisa, I was attracted by the idea I had formed as a child, of an "eighth-century" physics – a kind of physics that allows you to make an important discovery in a one-room laboratory while spending only a little money – exactly the opposite of today's physics, which requires research machines that are increasingly large and expensive, and have to be run by ever-larger teams of scientists.*

*In this scenario, "cold fusion" stands out as a remarkable, fascinating exception. Testing the concept is relatively affordable for everyone, from someone who works as an amateur to small and medium companies. And, as*

*we shall see in this book, this also applies to the Energy catalyzer, which has always struck me by its incredible simplicity, which characterizes at least 90% of the whole project.*

*The issue of its “secret catalyst”, then, is very interesting. In fact, one can look forward to enjoying the experience of setting up the rest of the machine with the help of this book, or can try – as I did in this volume – to work patiently at putting together the many “pieces of the puzzle” so as to be able to reach a logical conclusion, as a detective would do when facing the enigma of a crime in which the murderess is unknown. Luckily, after all, there are no perfect crimes...*

*So, all I need to do now is to say goodbye to you, and – of course – wish you a good read!*

*Mario Menichella*