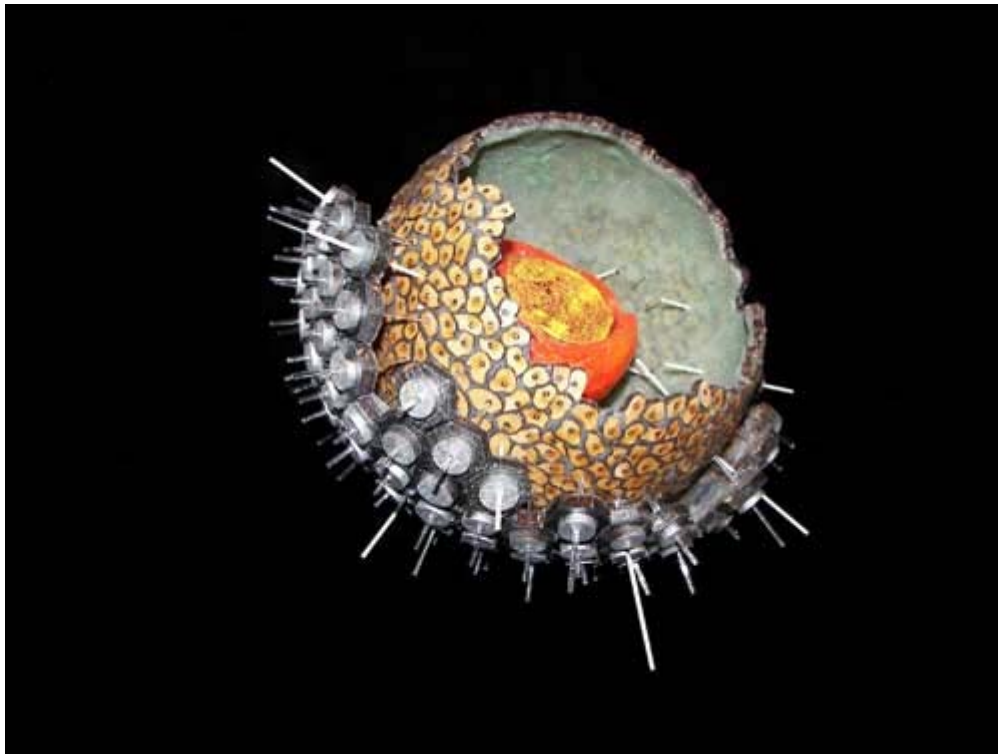


Fractal Reactor: Recreating the Sun - Mary Lee Grisanti



1- Todd Siler, Fractal Reactor (Model), 2000. Photo: Hermann Feldhaus, Courtesy Ronald Feldman Fine Arts, New York

When you enter the Ronald Feldman Gallery to see Todd Siler's "Fractal Reactor: Recreating the Sun," you are immediately pulled into two directions. One is toward the roiling blast of fiery images on the wall facing you—and the other is to the story of those images, mounted on the wall next to you. That story principally consists of a paper presented by Siler to the Symposium on Current Trends in International Plasma Fusion Research in Washington, D.C.—a conference under the auspices of The International Atomic Energy Agency, The Lawrence Livermore Laboratory and The Los Alamos National Laboratory, among others. The paper details Siler's proposal for a new model of Plasma Fusion, which would grant the world a clean and virtually inexhaustible source of energy. It's a revolutionary idea, running counter to current understanding of the field.

So why are the world's best physicists paying such close attention—and what does that have to do with the gorgeous fireballs in the Feldman Gallery?

Theoretical physicist and American Book Award Winner, Dr. Fred Alan Wolf, explains Siler's work this way: "In today's fusion devices, function determines form (thus, technology is limited by physicists' theories of the processes). But nature doesn't work that way. It should be form determining function, as Siler indicates. In other words, we can see what Nature designs so why not follow her?"

Now for the fireballs: The paintings, drawings, multimedia and sculptural models careening around the walls like electrons around the nucleus of an atom are precisely the way Siler achieved his breakthrough. Although Todd

Siler was granted the first interdisciplinary Ph.D. by the Massachusetts Institute of Technology, he is first and foremost a visual artist. It is because he brings his unique way of seeing to the world of plasma physics that he can see what physicists are missing.

This is not a matter of approaching science aesthetically or viewing scientific imagery in an artistic way. It is not taking science and making it art. It is not even a fusion. "Recreating the Sun" is an extraordinary return to the source, wherein these are not two ideas or phenomena, but one.

Today, the concept of uniting art and science is no longer novel, and it is difficult to remember a time when it was not only illegitimate, but also invisible. This is in no small part attributable to Siler, an early and ardent visionary in this area. He is a founder of the ArtScience movement and an expert on creativity whose ideas are rapidly taking hold in progressive schools. Siler's mission is deeply personal and rooted in his own childhood. The child of a concert pianist and a developer of medical technologies, he was always both an artist and a scientist. A drawing prodigy obsessed with medicine, in college he spent a year print-making with Leonard Baskin—and did pre-med on his own. Meanwhile, he invented a new printing technology, later patented by MIT.

Siler's career has been propelled by both art and science, from a Fulbright in India studying symbolism and allegory in Hindu art, to teaching neuropsychology at MIT. His first book, *Breaking the Mind Barrier*, invited scientists to see across the divide into art—and incidentally prefigured current understanding of how video games work in the brain. Siler's recent work uses visual strategies to create transdisciplinary collaboration in model-building workshops for schools and business. One particularly moving model was created by students upset by encroaching violence at Columbine High School—several years before the tragic shooting.

Siler's work is in the permanent collections of The Whitney Museum of American Art, The Solomon R. Guggenheim Museum and MOMA, among other major institutions, yet it has never been confined by the art world—rather, it has served to broaden our view of what, exactly, the art world is. The champions of Siler's work are as eclectic as they are impressive, including not only nuclear physicists but people like Harvard art historian James Ackermann, Jazz musician Ornette Coleman and New York City Mayor Michael Bloomberg.

Ronald Feldman deserves credit for recognizing Siler's visionary potential early on. Even before Siler went to MIT, Feldman understood his relevance. "When Todd was starting out, people used to ask: Is he an artist or is he a scientist?" Feldman says. "But really art has been doing this for years. Think back to the Renaissance when people didn't do anything without understanding that the aesthetic was a metaphor for the idea."

The true revolutionaries not only change the fields in which they work, they change the world around them. Many artists change or expand what we recognize as art, but very few leave the landscape so transformed that life is different. Todd Siler might just be one of them.