



— News

Technology Pioneer Marvel Fusion Attracts Leading Scientific Talent to Munich

Munich, 21.4.2021. Marvel Fusion, the German technology pioneer in the field of fusion energy, is expanding its team of scientists. Founded in 2019, the company which develops a CO₂-free energy solution as a crucial contribution to the global energy transition, is bringing leading international fusion scientists and experts in laser and nanotechnology to its Munich headquarters.

Marvel Fusion has developed a unique fusion technology based on using quantum effects that leverages recent scientific breakthroughs and builds on rapidly accelerating innovations in laser- and nanotechnology. This eliminates existing problems such as hydrodynamic turbulences with fusion and brings commercialization within reach for the first time.

Fusion energy, created when two atomic nuclei fuse, is a high-energy-density, low-footprint energy source that provides completely CO₂-free energy at competitive prices. With the right choice of fuel, in Marvel Fusion's case Hydrogen-1 and Boron-11, the fusion reaction does not produce long-lived radioactive residues and poses no safety risk. Attracting pioneers in the field will ensure Marvel Fusion a leading role in harnessing the global potential of fusion and laser technologies.

A novel fusion concept with “disruptive potential” (S. Glenzer, Stanford University)

Prof. Siegfried Glenzer of Stanford University, a renowned scientist in the field of high energy density physics, will closely work with Marvel Fusion's science team on further refining its technology that's based on using quantum effects. Glenzer is a professor and director of the High Energy Density Division at the Stanford Linear Accelerator Center (SLAC). He has made ground-breaking discoveries in the development of new methods for plasma diagnostics using intense X-ray light sources and high energy density. The Stanford professor predicts great opportunities for Marvel Fusion's laser-based fusion technology: “This is a completely novel technology concept with disruptive potential. It can open a new path to fusion ignition that is suitable for commercial power generation.”

To further develop its proprietary physics models, Marvel Fusion welcomes Prof. Hartmut Ruhl, a professor at the Department of Physics at Ludwig Maximilian University in Munich (LMU) and the Chair of Computational Physics there, to its team of scientists. Ruhl will contribute his expertise in the field of nonlinear quantum dynamics in fusion fuel that can significantly increase fusion yield. Thrilled with the prospect of working with Marvel Fusion, Ruhl is optimistic about the future. “With the combination of ultra-short, high-intensity laser pulses and nanostructured fuel pellets available today, the chances of overcoming the hurdles to fusion that have existed until now are better than ever.”

A “highly original” fusion technology (F. Metzler, MIT)

From the Massachusetts Institute of Technology (MIT) **Dr. Florian Metzler** supports the science team on the intersection of plasma physics and the material science required for the development of nanostructured targets. The Research Scientist at the MIT Industrial Performance Center and the MIT Nuclear Science and Engineering Department is an expert for innovative fusion technologies and specialized on enhancing fusion rates through quantum dynamical effects. He states that the technology



of Marvel Fusion is "highly original and creatively combines several emerging technologies". The multidisciplinary scientist has been at MIT for more than a decade with positions held in six departments.

Further recruited talent includes, **Prof. Todd Ditmire** of the University of Texas to lead the technology and power plant development; **Dr. Sven Steinke**, the new head of experimental physics and laser department, who relocated to Munich from Berkeley Lab, California; **Dr. Erhard Gaul**, with over 20 years of experience in designing, building and operating high peak power lasers; **Prof. Jens Niemeyer**, an expert in hydrodynamic simulation at the University of Göttingen Georg August University; and **Dr. Marius Schollmeier** who joins Marvel Fusion in the role as VP Fusion Experiments.

Marvel Fusion CEO **Moritz von der Linden** and Marvel Fusion CTO **Dr. Georg Korn** are pleased with the new additions to their team. "We are thrilled to welcome high caliber science talent to our Munich headquarter. Given our progress in physics and technology, we are on a credible path to make fusion-based electricity a reality."



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