



## 10 QUESTIONS WITH DR. HONGHAI SONG CEO FOUNDER, CANYON MAGNET ENERGY

Dr. Song is the founder and CEO of Canyon Magnet Energy. He is an expert in superconducting magnets, specializing in high-temperature superconductors (HTS) like REBCO. He's an IEEE senior member and reviewer for critical conferences, demonstrating his commitment to advancing applied superconductivity. After graduating with a doctorate from Florida State University's National High Magnetic Field Laboratory in 2010, his research focused on HTS coils and quench protection in low-temperature, high-field settings. He has worked at Brookhaven National Laboratory, FRIB at Michigan State University, GE, and Philips.



**Dr. Honghai Song**  
CEO & Co-Founder

### 1. Tell us about the origin of Canyon Magnet Energy?

I was studying materials as part of my electrical engineering studies. Later, I was exploring high-temperature superconductors while working at Brookhaven National Laboratory. Later, I worked as the director of magnet systems at Thea Energy, I decided that starting a magnet company makes sense. Canyon Magnet Energy started last year (2023) focusing on fusion energy, especially the fabrication of more durable HTS magnets.

### 2. Who are your investors?

Canyon Magnet Energy just closed a pre-seed round earlier this year with 3 investors. We are now looking to close seed funding round (\$3M-\$5M) and are talking to a number of classes of investors.

### 3. What is an HTS magnet?

Canyon turns HTS tapes/wire (from US, Japan, Germany, etc.) into magnets for customers. Their challenge is fusion companies that want to build the magnets themselves. There are several fusion companies that we are building magnets for; we also build magnets for space thrusters, MRIs, and other use cases.

### 4. What makes your approach unique in the market?

Canyon has a deep knowledge of magnetics and HTS magnets, and we focus solely on magnetics. We are also recruiting people very carefully to fit into the team, and to build a company culture dedicated to meeting customer needs.

### 5. What do you wish people understood about your company?

We are here to help our customers be successful. Canyon Magnetics can co-design HTS magnets with companies to maximize the efficiency and minimize the cost of cryogenic magnets and systems.

## COMPANY INFORMATION

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**FOUNDED**  
2023

**EMPLOYEES**  
50

**FUNDING**  
SOSV/HAX, Liquidmetal  
Ventures, Ecosphere  
Ventures, DOE, NSF,  
ARPA-E, US Air Force

**HEADQUARTERS**  
Stony Brook, NY

**PRODUCTS**  
HTS Magnets Design  
Software Testing  
Equipment

**DEVELOPMENT PARTNERS**  
Fermi Labs  
Brookhaven Labs

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### 6. Who are your target customers?

Primarily companies building fusion machines, but we support other use cases as our customers require.

### 7. What is your biggest supply chain challenge?

Getting HTS tapes is not too difficult. The bigger challenge is educating fusion companies on the challenges that they will face by trying to be vertically integrated. There are things like stress analysis that Canyon provides that can help their customers. I hope that these companies can be more open to cooperation in the future.

### 8. When will commercial fusion electricity be on the grid?

If everyone works together, maybe 8-10 years. However, this is an area where competition and lack of cooperation can push this timeline out.

### 9. Who will be the first country (and/or company) with commercial fusion?

The United States. The innovation environment is great here, and the number of companies in the field. This allows you to fail faster and innovate quicker.

### 10. Other things you want people to know about your company?

We are here to help fusion companies collaborate on their products, and to help them succeed.

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## ABOUT CANYON MAGNET ENERGY

Our vision is to design and build reliable HTS magnets which will meet your fusion system specification. Our technology will make the best use of HTS REBCO conductor high current density with no-insulation winding approaches, and specifically optimize turn-to-turn resistance to reach acceptable ramping time and long-term operation requirements.