

# Can Non-Thermal Plasma increase efficiency and reliability over traditional catalysts for CO<sub>2</sub> conversion on Earth and Mars?



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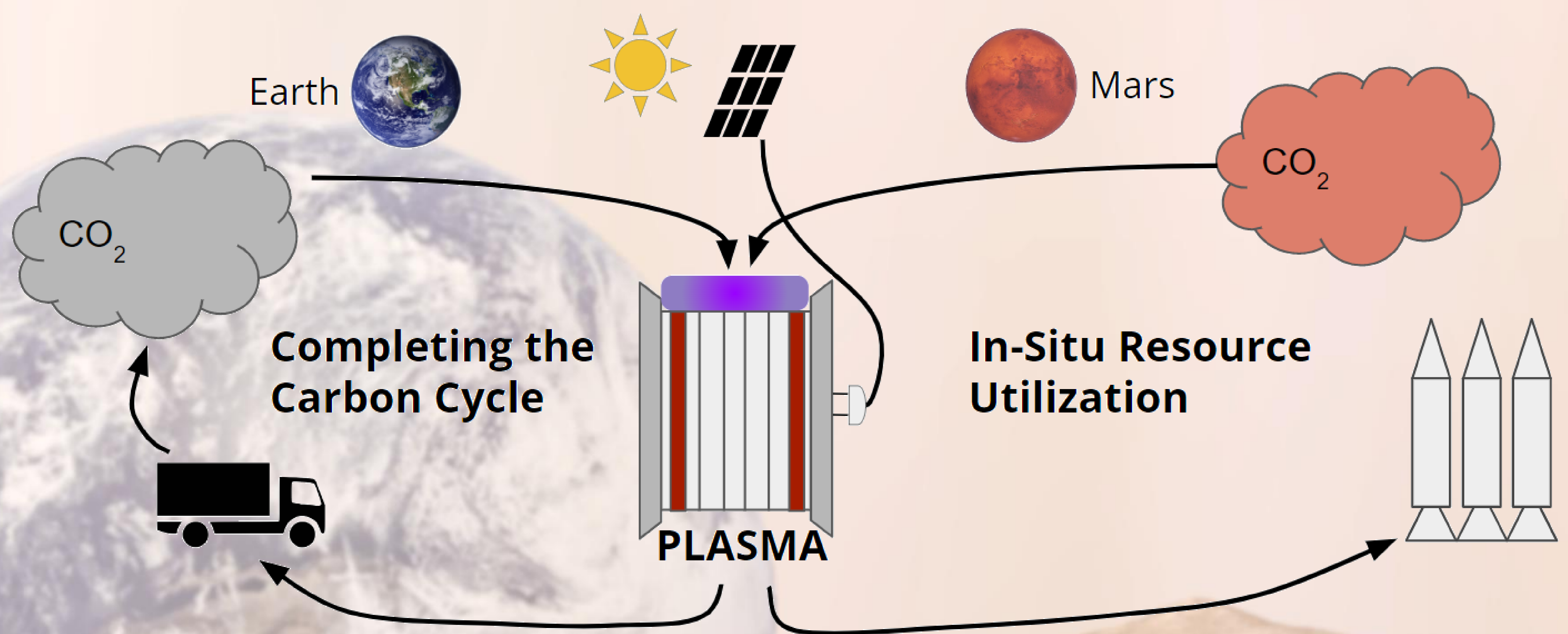
2. Instituto Superior Técnico Lisbon

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By targeting specific chemical activation pathways for CO<sub>2</sub> splitting, non-thermal plasma is:

- Operable at mild conditions
- Scalable, modular
- Low financial and resource cost



1. Model the effectiveness of plasma regimes for CO<sub>2</sub> splitting

2. Integrated reactor model for CO<sub>2</sub> splitting AND separation

3. Experimental testbed at the reactor scale: from splitting to separation

**Design and optimization in terms of conversion yield and energy efficiency**

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