EDITH COWAN UNIVERSITY

PROJECT DETAILS

Project Title:

Exploring geological mechanisms for sustainable natural hydrogen production in subsurface environments

Project Summary:

In the context of the global energy transition, ensuring a sustainable hydrogen supply is paramount. This study investigates brine/rock interactions in subsurface media to reveal natural hydrogen production mechanisms. Focusing on geochemical processes, the research aims to uncover the conditions conducive to hydrogen generation in subsurface environment, addressing critical gaps in understanding. Expected outcomes include identifying key factors influencing hydrogen production and elucidating mechanisms governing brine/rock interactions leading to geological hydrogen production. Significantly, the research holds promise for unlocking new insights into sustainable hydrogen energy sources and developing techniques for optimising natural hydrogen production processes, thereby contributing to advancements in clean energy technologies and environmental sustainability.

Preferred Applicant Skillset:

We are seeking a candidate with a strong background in reservoir engineering, geo-energy, geology, geochemistry, or related fields, coupled with a passion for sustainable energy research. An ideal applicant will demonstrate proficiency in experimental techniques, data analysis, and geological/reservoir modelling. Additionally, strong communication skills and the ability to work collaboratively in a multidisciplinary team are highly valued. Prior experience in subsurface geochemistry or hydrogen research would be advantageous. Above all, we are looking for a motivated individual who is eager to tackle complex scientific challenges and make a meaningful contribution to the field of clean energy technology.

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