



Job Title	Development Engineer
Location	West London, UK
Type	Full time
Salary	Salary plus Shares  We want our team to be invested in the business, rewarded through the creation of value. For this reason, we have a shareplan.
Holiday	25 days

### About Supercritical:

Supercritical is developing the world's first high pressure, ultra-efficient water electrolyser for green hydrogen production. The system will be capable of overcoming many of the limitations experienced by today's incumbent electrolysis technologies. By harnessing the benefits of heat and pressure, Supercritical's proprietary design enables us to operate in the region of the highest electrical efficiencies seen commercially today, whilst delivering hydrogen at high pressure which is perfect for storage. The resultant green hydrogen and oxygen products that we produce can be used to decarbonise heavy industry, chemicals, transport and more. We have recently closed a £2.6million funding round and have announced two incredible projects - [WhiskHy](#) and [GreeNH3](#)

- Globally 'Top 50 to watch for climate action' - CleanTech Group
- Top5 Zero Emission Solution to watch in 2022 (StartUS Insights)
- Runner-up and People's Choice in 'Shell's 2021 New Energy Challenge'
- Finalist 'Hydrogen Hypothesis' - OZ Minerals
- 'Most Promising CleanTech Solutions in 2023' - CEMEX Ventures
- '100 Most Promising Global Energy Start-ups of 2023' - Start Up Energy Transition

### The opportunity:

Does clean technology innovation excite you? Are you a problem solver? Do you want to have your ideas heard, work in a small, dynamic team, putting great ideas to work quickly in pursuit of a cleaner environment? You might be exactly what we're looking for!

Supercritical is looking for an experienced and dynamic Development Engineer to join our dedicated R&D team. The problems are many and the solutions are there to be created. As a start-up, we move quickly and nimbly in response to new findings and data. Working at the forefront of electrolyser development, mapping an entirely new operating regime, we're overcoming challenges that have been considered before! We want to grow our team with curious, technically driven and commercially focused leaders.



Founded in 2020, Supercritical has built its proof of concept, secured private and public funding and is moving forward to build its first module. You will join an exciting and fast moving company that is intent on disrupting the energy industry and enabling a net zero future.

An electrolyser is a complex electrochemical system which can sit in any number of value chains. Supercritical's key sectors include chemicals, energy, heavy industry and transport, and we need a Development Engineer that will accelerate and strengthen our technical team in its cell and module development, manufacturing processes and test facilities.

We're really excited about expanding and diversifying our team. Coming from a diverse background ourselves, we do not discriminate regardless of disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race (including ethnic or national origins, colour and nationality), religion or belief (including lack of belief), sex, sexual orientation or any other characteristic. We can't wait to have you on board!

### Accountabilities:

- Tackling technical challenges with innovative solutions, from mechanical design to coating processes or modelling to electrochemical trials, your best ideas will be put to the test.
- Scoping and managing external development partners in delivering work programmes essential to the core electrolyser's development.
- Designing, specifying, procuring, building and commissioning test-rigs.
- Programming integrated data acquisition of the test-rig (eg. pressure, temperature, power input, product purity).
- Supporting control and automation activities to maximise the efficiency of lab operations.
- Defining and optimising designs of experiment across novel process development or test conditions.
- Introducing automated safety systems and shutdown features to enable unsupervised testing.
- Enabling electrolyte recirculation and replenishment.
- Running experimental protocols.
- Identifying improvements and optimisations that can be introduced in the test-stand.
- Working with the wider engineering team when considering scale up of learnings in the lab.
- Support in a wider range of activities that are crucial to enabling Supercritical's success.



## About you

### Essential

- Thrive in a startup environment as a self-starter and proactively identify problems and pursue solutions. Flexibility and responsiveness in a fast-paced, dynamic, small-team environment
- Be passionate about a net zero environment, excited by innovation and proactive in your pursuit of it.
- Have a PhD in a science or engineering discipline or a Masters with 3+ years of industrial experience
- Be able to work well in a team whilst also self-driven and autonomous on the task at hand.
- Be able to work with vendors to spec hardware and software.
- Have experience in automation and safety systems.
- Familiarity with risk assessments/GLP.

### Desirable

- Experience with high pressure or high temperature gas and fluid systems.
- Use of swagelok fittings/components.
- Basic understanding of electrochemistry, catalysis, chemical engineering.
- Experience using MATLAB and/or (C/Python).