

**JUAN ANTONIO ROLDÁN GARCÍA**  
**CHEMICAL ENGINEER HYDROGEN EXPERT**

Location: Granada

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**PROFESSIONAL PROFILE**

I am a Senior Chemical Engineer with 8 years of professional experience in green hydrogen projects within a creative and innovative environment, ranging from research, development of electrochemical technologies and chemical process design, to feasibility studies, conceptual, basic and detailed engineering, as well as management, control, supervision and start-up of teams and projects. I have skills as a leader in hydrogen process design, management and coordination of R&D&I projects and in techno-economic evaluation of new ideas.

**EXPERIENCE**

**GRAN SOLAR GROUP S.L, MADRID. 2020 - 2024.**  
**EXPERT HYDROGEN ENGINEER.**

**Functions:**

- Techno-economic feasibility studies of hydrogen plants and derivatives.
- Material and energy balances of the process.
- Process flow diagrams and instrumentation and control, P&ID.
- Conceptual engineering for the production and supply of H<sub>2</sub> gas and derivatives.
- Basic engineering and balance of plant sizing.
- Specifications and selection of original equipment and suppliers.
- R&D&I project for the manufacture of AEL electrolyzers.
- Analysis of ISO/UNE standards (14687, 17124, 20100 etc.).
- Safety and explosive atmosphere studies.
- Project management and planning (deadlines, workflows, etc.).
- Recovery, Transformation and Resilience Plan, MITECO Spanish government.
- Liaison with the European Clean Hydrogen Alliance.
- Liaison with the Andalusian Hydrogen Cluster.

**Achievements:**

- Design and optimization of a 20 MW hydrogen production plant.
- Creation of an R&D&I program for the development of AEM electrolyzers.
- Participation in MITECO and IDAE aid programs.

**CLÚSTER ANDALUZ DEL HIDRÓGENO, ANDALUCIA. 2020 - 2024.**  
**PRESIDENT. 2020 - 2022.**

**Functions:**

- Management of the Association.
- Representation of the Association before all kinds of authorities.
- Execution of the resolutions of the Board of Directors.

**Achievements:**

- Creation of the Andalusian Hydrogen Cluster business association.
- Development of the cluster identity and value proposition.
- Bilateral agreements with collaborating entities.

**GENERAL SECRETARY. 2022 - 2024.****Functions:**

- To call the meetings of the general and extraordinary assemblies.
- To take minutes of the meetings held and certify their agreements.
- To draw up and authorize the certifications and documents to be issued.

**Achievements:**

- Creation of working commissions in collaboration with the Junta de Andalucía.
- Creation of a platform for the dissemination of technical information.
- Representation of the Cluster in forums and events.

**HYDROGEN CLEAN ENERGY S.L, SEVILLA. 2019 - 2020.****EXPERT HYDROGEN ENGINEER.****Functions:**

- Feasibility study of H2 gas production plant.
- Material and energy balances of the process.
- Process flow diagrams and instrumentation and control, P&ID.
- Conceptual engineering for H2 gas production and supply.
- Basic engineering and sizing of the balance of plant.
- Detailed engineering of the telecommunication tower.
- Specifications and selection of original equipment and suppliers.
- R+D+i project for the manufacture of telecommunication towers.
- Analysis of ISO/UNE standards (14687, 17124, 20100 etc.).
- Safety and explosive atmosphere studies.
- Project management and planning (deadlines, workflows, etc.).

**Achievements:**

- Design and optimization of a hydrogen telecommunications tower.
- Manufacture of an isolated telecommunications tower.
- Collaboration with the National Hydrogen Center.

**LETTER INGENIEROS S.L, GRANADA. 2018 - 2019.****EXPERT HYDROGEN ENGINEER.****Functions:**

- Feasibility study of a 1 MW H2 gas production plant.
- Material and energy balances of the process.
- Process flow diagrams and instrumentation and control, P&ID.
- Conceptual engineering for H2 gas production and supply.
- Basic engineering and balance of plant Power to Power.
- Specifications and selection of original equipment and suppliers.
- R&D&I project for innovative business clusters AEI.
- Analysis of ISO/UNE standards (14687, 17124, 20100 etc.).
- Safety and explosive atmosphere studies.
- Project management and planning (deadlines, workflows, etc.).

**Achievements:**

- Design and optimization of a Power to Power 1 MW plant.
- Obtained 120,000€ grant from the MITECO subsidy program.
- Visit to Energy Park Mainz Germany, visit to Hydrogenics Belgium.

### **FORMACIÓN ACADÉMICA Y COMPLEMENTARIA**

- **2015. MASTER'S IN CHEMICAL ENGINEERING.**  
UNIVERSITY OF GRANADA. 3300 HOURS. GRANADA.
- **2015. UNIVERSITY ENTREPRENEURSHIP COURSE.**  
UNIVERSITY OF GRANADA. 220 HOURS. GRANADA.
- **2016. HYDROGEN PROCESSES AND FUEL CELLS.**  
ARAGÓN HYDROGEN FOUNDATION. 150 HOURS. ZARAGOZA.
- **2016. FUNDAMENTALS OF FUEL CELLS AND HYDROGEN SAFETY.**  
ARAGÓN HYDROGEN FOUNDATION. 100 HOURS. ZARAGOZA.
- **2017. FUEL CELLS FOR TRANSPORTATION APPLICATIONS.**  
ARAGÓN HYDROGEN FOUNDATION. 100 HOURS. ZARAGOZA.
- **2017. FUEL CELL-BASED GENERATORS.**  
UNIVERSIDAD DE BIRMINGHAM. 100 HOURS. BIRMINGHAM.
- **2017. COMBINED HEAT AND POWER SYSTEMS BASED ON HYDROGEN FUEL CELLS.**  
UNIVERSIDAD TÉCNICA DE DELFT. 100 HOURS. DELFT.
- **2017. MICRO FUEL CELLS: COMPONENTS AND PROCESSES.**  
UNIVERSIDAD DE BIRMINGHAM. 100 HOURS. BIRMINGHAM.
- **2017. MICRO FUEL CELLS: COMPONENTS AND PROCESSES.**  
UNIVERSIDAD DE BIRMINGHAM. 100 HOURS. BIRMINGHAM.
- **2024. EPHYMOB PROGRAMA DE FORMACIÓN TÉCNICA DE MOVILIDAD H2.**  
FUNDACIÓN HIDRÓGENO ARAGÓN (FHA). 30 HORAS. ZARAGOZA.

### **LANGUAGES**

English: Official level B2, First Certificate in English (FCE). Currently studying C1 (Advance)

### **COMPUTER SOFTWARE**

- Aspen Plus/HYSYS, process simulation, advanced level.
- CHEMCAD, process simulation, advanced level.
- MATLAB, numerical calculation and algorithms, advanced level.
- Microsoft Project, project management, advanced level.
- Microsoft Excel, numerical spreadsheet, advanced level.
- AutoCAD P&ID, diagram design, advanced level.
- AutoCAD Plant 3D, industrial plant design, intermediate level.
- C++, computer programming, intermediate level.
- Microsoft Office Suite: Word, PowerPoint, Outlook, advanced level.