

Innovative Processes with Ionic Liquids

From a test tube to a large-scale plant: proionic gmbh gets process engineering reinforcement!

The technology company, proionic, which is specialised in the development of innovative process technologies based on ionic liquids, has been part of the VTU Group since the beginning of 2010. VTU supplies engineering and special systems for the pharmaceutical and chemical industries. proionic is now expanding the Group's extensive range of products and services.

Roland Kalb, company founder and CEO of proionic, sees major advantages in the new interdisciplinary company configuration: "In our work, we focus on the application – we develop solutions for processes. In the VTU Group, we now have expertise ranging from process engineering planning up to plant delivery onboard. We can involve experts from process engineering in the development right from the start and that way take decisive courses in the development process at a very early stage. **proionic** can now offer – around the world – innovative complete solutions even for large processes that go beyond the laboratory and pilot plant scale. This results in tremendous competitive advantages for our customers."

Liquid salts with innumerable applications

Ionic liquids are low-melting organic salts that are mostly liquid at room temperature. This results in a number of interesting properties: They are non-flammable, have practically no vapour pressure, have high thermal and chemical stability, and are liquid in a temperature range up to 350°C. In addition they are conductive and therefore prevent electrostatic charging.

These unique properties make applications possible with true innovative edges in a great variety of fields. This includes, for example, hydraulic fluids, lubricants, heat transfer fluids and extracting agents or absorbing agents, electrolytes, solvents or catalysts in reactive chemistry, in biomass processing and in galvanising. One enterprise has realised an industrial-scale implementation using one of the service media developed by proionic as a liquid piston in gas compressors.

Easy production through the innovative CBILS® process

proionic developed a new, modular manufacturing process for ionic liquids. With the patented CBILS® synthesis method, almost any anion and cation can be combined freely together, and the desired substances can be produced quickly, cost-effectively and in industrial quantities. This results in important benefits to the development process, because many ionic liquids can be tested quickly.

About proionic:

proionic produces ionic liquids for industry and develops new processes and technologies based on those ionic liquids. The company's technology development covers the entire spectrum ranging from finding innovations, confirming the feasibility, R&D, the pilot projects and right up to industrial implementations. Here, **proionic** supplies ionic liquids from the first samples up to bulk quantities for industrially applied technologies in the respective target quality.

About VTU:

The companies of the VTU Group are planners, consultants and subcontractors for processing plants in the pharmaceutical, biotechnology and chemistry. The internationally active Group currently has a workforce of around 200 highly qualified employees.

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