

## Press release

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### **Dr. Ailo Aasen wins Thermodynamics and Transport Properties Prize**

#### **Work on bulk and interfacial thermodynamics of mixtures scoops Excellence Award**

**Dr. Ailo Aasen** has won the European Federation of Chemical Engineering's 2021 Excellence Award for an outstanding PhD thesis in *"Bulk and interfacial thermodynamics of mixtures: From aqueous systems to ultracryogenic fluids"*.

His thesis dealt with understanding and modelling the thermodynamics of bulk mixtures. Member of his evaluation committee, Professor David Reguera Lopez, commented: "The thesis deals with three of the most challenging topics in the field of thermodynamics: the development of accurate equations of state; the thermodynamic description of quantum fluids; and interfacial phenomena applied to nucleation. In all of them he has done outstanding contributions, reflected in eight published articles."



He further explained: "Ailo's analysis of the impact of curvature corrections in the nucleation of binary mixtures has solved one of the most longstanding problems of Classical Nucleation Theory: the unphysical prediction of negative number of particles in the critical nucleus. The work developed in Ailo's thesis shows that the proper incorporation of curvature corrections into Classical Nucleation Theory of binary and multicomponent mixtures solves this consistency problem and opens the door to accurate quantitative predictions of this phenomena."

The judging committee of EFCE's Thermodynamics and Transport Properties Working Party was highly complementary of the technical quality of Aasen's work, which included his innovative approach to include quantum effects into classical Helmholtz energy equations of state.

The Excellence Award consists of a cash prize of €1500 plus the opportunity to attend the 31st European Symposium on Applied Thermodynamics (ESAT 2021), where the award will be presented to Dr. Aasen. The ESAT 2021 conference will take place online, from 4-7 July 2021.

The strong quality of nominees for this year's awards must be acknowledged. As the following nominees addressed were all truly excellent, the judging committee has chosen to consider them as equal runners-up. The runners-up are Dr. Yuqiu Chen from Technical University of Denmark, Dr. Eleonora Ricci from the University of Bologna and Dr. Kamila Wysoczanska from the University of Porto.

The Award is generously sponsored by **ProSim**.

Ends



### **Related links**

EFCE media centre (<https://www.efce.info/News>)

EFCE Working Party on Thermodynamics and Transport Properties  
(<https://wp-ttp.dk/>)

31st European Symposium on Applied Thermodynamics - ESAT 2021  
(<http://www.esat2020.com/>)

### **Notes to media**

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### **About chemical engineers**

Chemical, biochemical and process engineering is the application of science, maths and economics to the process of turning raw materials into everyday products. Professional chemical engineers design, construct and manage process operations all over the world. Oil and gas, pharmaceuticals, food and drink, synthetic fibres and clean drinking water are just some of the products where chemical engineering plays a central role.

### **About EFCE**

Founded in 1953, The European Federation of Chemical Engineering (EFCE) is a non-profit-making association, whose object is to promote co-operation in Europe between non-profit-making professional scientific and technical societies in 30 countries for the general advancement of chemical engineering and as a means of furthering the development of chemical engineering. See [www.efce.org](http://www.efce.org)