

# Junior professor in plant-based food process engineering

Ref. ZAP-2023-60

In the Science, Engineering and Technology Group of KU Leuven, there is a full-time academic vacancy in the area of plant-based food process engineering in Leuven (Arenberg). We are looking for internationally oriented candidates with an excellent research record and with educational competence within the field of food process engineering. For the research activities, the selected junior professor will be assigned to the Department of Microbial and Molecular Systems (M<sup>2</sup>S), Division 'Centre of Food and Microbial Technology (CFMT)'. For teaching and other educational activities, he/she will be affiliated with the Faculty of Bioscience Engineering (FBSE).

CFMT is active on four campuses and has about 145 collaborators in seven research groups, led by 13 professors. Research at CFMT focuses on raw materials and their constituents, microorganisms and processes that are relevant to various bio-industries and to the food industry in particular. They generate and disseminate scientific knowledge and apply it in food process innovations with a focus on chemical and microbiological safety, organoleptic properties, shelf life, and nutritional and health aspects. The research activities span the continuum from raw materials over production of foods and ingredients to consumption and digestion and adopt a multidisciplinary and integrated approach at molecular scale, mesoscale and macroscopic scale. CFMT research groups have a solid, up-to-date research infrastructure, an extensive national and international network, both in the academic and industrial world, a stable supply of highly talented MSc. students and represent a supportive work environment.

More information can be found at: <https://www.biw.kuleuven.be/m2s/clmt/cfmt>.

FBSE organises Dutch and English language study programmes at bachelor, master, honours, postgraduate and PhD-level in Bioscience Engineering at large and in Food Science in particular. To date, about 2300 students are enrolled in the faculty's programmes: <http://biw.kuleuven.be/en/>.

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## Duties

### Research

You will develop an international research programme aiming to understand and quantify process-structure-function relationships along the food processing chain, coupling the fields of food process engineering and biomaterial science for heterogeneous food systems. The main subject of research will be the transformation of plant-based raw materials, including the sustainable valorisation of agricultural sidestreams, into food ingredients or food systems by traditional and/or novel processing technologies. Research will span and include both mechanistic understanding and quantitative modelling (i.e. in terms of kinetics of (bio-)chemical and physical reactions) of the impact of various unit operations on functional properties of foods and/or food ingredients.

Specifically, we expect the following contributions.

- You develop an internationally competitive research program on elucidating and quantifying process-structure-function relationships in heterogeneous plant-based food systems or ingredients.
- You strengthen the existing research lines and provide additional expertise. Research must have a clear quantitative dimension and must be complementary to existing expertise, yet at the same time tie in with the ongoing research at CFMT.
- You strive for excellence in research, publish at the domain-specific highest scientific level, while also considering opportunities for research valorisation in collaboration with industry.
- You set up collaborations with other academic staff members of CFMT, the Department M<sup>2</sup>S and beyond, and you set up national and international collaborations around your research program.
- You acquire competitive research funding (regional, national and European) for fundamental and applied research.
- You supervise PhD-projects of an international level.

### Teaching

You ensure high-quality teaching of courses offered by the Faculty of Bioscience Engineering within the area of food process engineering, with a strong commitment to the quality of the programmes as a whole. At the start, the assignment will cover an introductory course on unit operations in biological and food industries at the bachelor level (Dutch course) and an advanced engineering course in low temperature processing (English course) at the master level. You will also contribute to the pedagogic project of the faculty/university through the supervision of master theses and internships and as promoter of PhD students.

You will develop your teaching in accordance with KU Leuven's vision on activating and research-based education and make use of the possibilities for the educational professionalisation offered by the faculty and the university.

### Service

You are prepared to provide services to the scientific community and to society and to the internal functioning of the department, the faculty and KU Leuven.

You are ready to take up an active role in councils, educational committees, working groups of the university, and in particular of the divisions, departments and faculties you will belong to.

## Profile

- You have a PhD in Food Engineering, Food Technology or Bioscience Engineering, or an equivalent degree in a domain that guarantees an excellent starting position for the above described teaching and research program.
- You have a strong background in food process engineering and have knowledge about and expertise with heterogeneous food systems and biomaterial science, allowing you to substantially advance the field of process-structure-function relations in foods throughout the food production chain, beyond qualitative approaches (focus on process and kinetic modelling).
- You have a strong scientific track record in the field, proven by publications in international leading journals.
- You possess the capacity to lead a research team and attract research funding.
- Demonstrated scientific mobility is considered a strong asset.
- You have demonstrable qualities related to academic education. Teaching experience is an advantage.
- You possess organisational skills and have a cooperative attitude. You also possess leadership capacities within an academic context.
- Proficiency in English is required.
- The official administrative language used at KU Leuven is Dutch. If you do not master Dutch (or do not master it well) at the start of employment, KU Leuven will provide language training to enable you to take active part in meetings within 5 years of the start of your employment.
- Before teaching courses in Dutch or English, you will be given the opportunity to learn Dutch, respectively English, to the required standard.

## Offer

We offer full-time employment in an intellectually challenging environment. KU Leuven is a research-intensive, internationally-oriented university that carries out both fundamental and applied scientific research. Our university is highly inter- and multi-disciplinarily focused and strives for international excellence. In this regard, we actively work together with research partners in Belgium and abroad and provide our students with an academic education that is based on high-quality scientific research.

You will work in Leuven, a historical, dynamic and lively city located in the heart of Belgium, at 25 kilometers from Brussels, the capital of the European Union, and less than two hours by train from Paris, London and Amsterdam.

In principle, junior professors are appointed as an assistant professor on tenure track for a period of five years. After this period and a positive evaluation, they will be permanently appointed (or tenured) as an associate professor.

KU Leuven is well set to welcome foreign professors and their family and provides practical support with regard to immigration and administration, housing, childcare, learning Dutch, partner career coaching, ...

To facilitate scientific onboarding and accelerate research in the first phase a starting grant of 110.000 euro is offered to new professors without substantial other funding, appointed for at least 50%. Additional funding of 10.000 € and a PhD fellowship for 4 years will be provided by the hosting department and division, and 2.000€ by the faculty.

## More information

[Centre for Food and Microbial Technology](#)  
[Faculty of Bioscience Engineering](#)

## Interested?

For more information on the content of the job please contact Prof. dr. ir. Chris Michiels, tel.: +32 16 32 15 78, mail: [chris.michiels@kuleuven.be](mailto:chris.michiels@kuleuven.be) (chair Department M<sup>2</sup>S).

For problems with online applying, please contact [solliciteren@kuleuven.be](mailto:solliciteren@kuleuven.be).

Add to your application the following documents (more information is available on the KU Leuven job site):

- your biosketch in which you indicate your added value as an academic for research, education and service to society of your past career and of your future activities (maximum 2 pages);
- a file on your five most important publications or realizations;
- an extensive curriculum vitae including a full publication list and if applicable a portfolio of your architectural projects;
- your research plan with focus on the development of your research line and research team in relation with the colleague-researchers of the entity of employment (maximum 5 pages);
- your vision on academic education and its organization (maximum 2 pages);
- your contribution to society by outreach and public communication on science and technology, internal representation in boards and councils and service activities directly in relation to your developed expertise (maximum 1 page);
- your vision on leadership (maximum 1 page).

KU Leuven places great importance on research integrity and ethical conduct and will therefore ask you to sign an integrity statement upon appointment.

You can apply for this job no later than October 02, 2023 via the online application tool :

<http://www.kuleuven.be/eapplyingforjobs/60213176>

KU Leuven seeks to foster an environment where all talents can flourish, regardless of gender, age, cultural background, nationality or impairments. If you have any questions relating to accessibility or support, please contact us at [diversiteit.HR@kuleuven.be](mailto:diversiteit.HR@kuleuven.be).