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Press release

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Organisational matters, Personnel announcements
Chemistry
transregional, national

Prof. Dr. Doris Segets is new at the UDE: The printed nanolayer

Solar and fuel cells, LEDs, batteries – many sustainable technologies already contain nanoparticles. But still there are hardly any scalable processes for the production in industrial dimensions. That's what Prof. Dr. Doris Segets wants to change. She took up the professorship for "Process Engineering of Electrochemical Functional Materials" at the University of Duisburg-Essen (UDE). Already, she has been appointed to the board of directors of the NanoEnergieTechnikZentrum (NETZ).

Whilst nowadays nanoparticles can be produced in large quantities, there is still a lack of suitable processing methods for industrial production. In order to get closer to this aim, Segets first wants to clarify some basic issues: For example, by analyzing the properties of the particles she means to understand how they behave in contact with certain liquids. If she succeeds in distributing the particles evenly in the solvent, the result will be an ink that can be used to print structured, functional layers for numerous applications.

At the UDE, Segets will be performing her research both at the NETZ and at The Hydrogen and Fuel Cell Center (ZBT). For her, a matter of particular interest will be the "linked facilities" in the NETZ: These laboratories are directly connected to the large synthesis plants for nanomaterials. "One of my objectives is to characterize the layers generated from the particles online", the 36-year-old explains. "Along with our colleagues from the synthesis department, we could understand and improve the entire process chain from the production of nanomaterials to the finished layer for batteries or fuel cells."

Before joining the UDE, Segets worked at the Friedrich-Alexander-University Erlangen-Nuremberg. There, she studied "Chemical and Biological Engineering", received her doctor's degree in 2013 and subsequently was head of the "Nanoparticle Processing" working group as a postdoc. For the research that she performed here she was awarded the Friedrich Löffler Prize – one of the most important prizes for young engineers in particle technology. Over and above, between 2015 and 2018, she was also scientific coordinator of the Interdisciplinary Center for Functional Particle Systems.

Her appointment to the board of directors reveals that she is already deeply involved in research at her new workplace. Here, she succeeds Dr. Ekaterina Nannen, who was appointed to a professorship at the Hochschule Niederrhein in autumn 2018.

Segets' professorship is part of the national grant program for the promotion of young scientists (WISNA), which aims to offer young researchers a transparent and predictable path to a professorship for life. To date, 468 of these tenure-track professorships have been funded throughout Germany, 21 of them at the UDE.

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https://www.uni-due.de/imperia/md/images/bilder/pm_downloads/2019/segets_doris_prof_2019a.jpg

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