



Women in Science – 2<sup>nd</sup> Erlangen Symposium

## **Chasing Answers: A chemist's material journey to make a difference**

*Derya Baran*<sup>1</sup>

<sup>1</sup>King Abdullah University of Science and Technology (KAUST), Material Science and Engineering Program (MSE), KAUST Solar Center (KSC), 23955, Thuwal, Saudi Arabia  
[derya.baran@kaust.edu.sa](mailto:derya.baran@kaust.edu.sa)

Every scientific discovery starts with a question. Then, it is a journey chasing the answer/s. Life is not any different. Asking the right question is very important and to learn where to look for the answer and which tools you need to use. In this talk, I will share my journey chasing my own answers. I will share how I overcome biases and hurdles, what motivated me to science and academic life (well then combined with an entrepreneurial life) and will share my research passion which is solution processed energy conversion materials and devices.

The need for big data that the internet of things (IoT) has created in recent years has turned the focus on integrating the human body in the quest to understand it better, and in turn use such information for detection and prevention of harmful conditions. Applications in which continuous and uninterrupted operation is required, or where the use of external power sources may be challenging demands the use of self-powered autonomous systems. Organic photovoltaic devices are flexible, lightweight, and soft, capable of interacting with the human body and its mechanical demands. Their processability from solutions permits their adaptation to versatile fabrication techniques such as spin coating, roll-to-roll coating and inkjet printing, with benefits including low material usage and freedom of design. In this talk, I will present how organic photovoltaics can be utilized in printed electronics as energy harvesting devices.