

# Preface

## Editorial Note

*Dear Reader,*

When you read this issue of JUnQ, you might wonder why there is no article section. This is not - as one might think at first - due to a lack of submissions. Quite the contrary, we constantly receive articles, showing the need for a platform like JUnQ. The real difficulty lies in finding other scientists who are willing to put personal time and effort into reviewing these articles. Although this might be a general problem for many scientific journals, we do our best to ensure that it will not be a permanent one for JUnQ as the publishing of negative and null results still is supposed to be its key feature.

In our current issue, we have a look at a categorization of science not based on different scientific disciplines but on the very motivation behind scientific endeavors: fundamental science *versus* applied science. Correspondingly, this differentiation of the underlying motifs of science is already reflected in the cover, which has been designed by Robert Lindner for this issue.

To get an idea if the categories "fundamental vs. applied" are relevant for the classification of science especially in Germany, we have interviewed representatives of two of the big German research institutions - Prof. Maskos from the "Fraunhofer Society" and Christoph Herbort-von Loeper from the "Leibniz Association", both emphasizing the importance of transfer between fundamental research and applied science.

In his essay "Do we need Fundamental Research", Dr. Andreas Müller, astrophysicist at the "Technische Universität München" gives a complementary view on the topic in pointing out why classic fundamental science has been and still is relevant for modern societies, even if there is no obvi-

ous application in sight. Prof. Klaus Roth, whom we have interviewed regarding his upcoming JUnQ lecture series talk "How to Win a (Ig)-Nobel Prize" (more information can be found at the end of the journal), argues along the same lines when he states that "Basic research is *sine qua non* for any progress in the natural sciences, medicine, and all engineering disciplines".

2015 was the International Year of Light (IYL) - the second topic of this issue and consequently, the second theme illustrated in the cover. In an interview with Prof. Niemela, global coordinator in the IYL2015 secretariat, we take a look back at last year's IYL events. The interview is accompanied by two essays: In "A Brief History of Light", Susanne M. Hoffmann provides an overview about the history of using light and about its meaning for ancient cultures. Our new editorial board member Theresa Lückner writes about optogenetics - an exciting new principle of utilizing light-gated ion channels in neurobiology. At this point at the latest, with an example of how fundamental research in optogenetics may lead to new medical applications, we, in turn, can draw a connection to the first topic of this issue.

In addition to Theresa, we are lucky to count four new members to the JUnQ editorial board who I want to welcome on this occasion - Jennifer Heidrich, Tatjana Dänzer, Martin Nalbach and Kai Litzius.

Having said this, I hope you will enjoy this issue of JUnQ and that we can raise your interest to dig deeper into the featured topics.

—Philipp Heller