

Dr Valeska Ting
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The Research

Valeska is a materials scientist motivated by research leading to beneficial environmental impacts. One of her main research interests is the development of materials that can be used for hydrogen storage; if hydrogen is to be used instead of gasoline in cars then you need appropriate materials to safely store it. The materials that Valeska works with also have other applications. For example, she is currently working on a multi-partner collaborative project developing thin film sensors that can be attached to car exhausts to monitor the proportion of pollutions emitted. This information can be used to change fuel blends and reduce pollutant levels.

The Engagement:

The key 'publics': Industry (e.g. Ford, Land Rover, Airbus, MAST Carbon); Politicians (through the Royal Society's Pairing Scheme); General public (especially children and young people)

The type of engagement: inspiring, informing and educating others, building their capacity to make informed choices. In addition, receiving from these specialist 'publics' views, skills, knowledge and experiences that can be used to shape research and maximise its impact.

In engaging with industrial partners such as Ford, Land Rover, the European Aeronautic Defence and Space company (EADS), Airbus and MAST Carbon who have interest in technologies that use hydrogen, Valeska looks to ensure that her research is adopted and adapted into practical technologies that can make a real difference. By sharing her research findings with industry, promising aspects might be developed further:

"My goal in working with industry is for my research to be made into something that has a practical use. And of course if an industrial partner adopts an idea, that can become a good avenue of additional support and funding for further research."

Alongside building industrial partner links, Valeska has recently partaken in The Royal Society's Pairing Scheme, an annual programme wherein scientists are paired with either an MP or civil servant. Valeska was paired with Paul Freeman, a senior scientist in the Department of Energy & Climate Change, who initially hosted her in his Government office before Valeska arranged a reciprocal visit to Bath:

"The Royal Society scheme gave me an unprecedented opportunity to understand political decision making and its associated pressures, and to develop an appreciation of how to inform policy."

Finally, Valeska has undertaken a range of activities targeted towards a more 'general public', with the aims of making her research more accessible and enthusing others about science. Alongside delivering public lectures and public poster sessions, Valeska is an advocate of Ignite talks (5 minute long presentations with 20 slides, each slide moving on automatically every 15 seconds).

"Ignite talks are exciting to do and a quick way to convey a lot of information to an audience. By uploading talks online, conversations can continue; I've had lots of comments and emails from people who've seen my talks online."

"Videos are a low energy way of networking and engaging. You do the talk once, upload it to YouTube and then wait for the comments and emails to flood in!"

The Motivation:

Given that Valeska is motivated by research that will have a positive impact on the environment, her links with industry are a vital means to both fund new, and translate existing, research into technologies that will do just that. And if policy agendas need to be shaped to facilitate the uptake of certain technologies, then engagement with the political process proves crucial.

In recent years, Valeska has also noticed that the public engagement with research agenda is of increasing import to the University and to funding bodies. Many grant applications require you to demonstrate how you will reach non-academic audiences and to evidence that your research will deliver impact. Indeed, the Research Councils' Je-S application form contains two sections of relevance to this:

1. An Impact Summary where you explain which non-academic audiences will benefit from your research and how
2. A Pathways to Impact section where you explain how you will engage the audiences identified in the Impact Summary

The Professional Development:

As a Prize Fellow, Valeska has found engagement activities a good way to both develop and demonstrate certain skill-sets that are also of use for research and project management. Organisational skills and the ability to communicate to varied audiences are competencies that Valeska has developed through engagement and which she evidenced in her Prize Fellowship application. She also believes that engagement demonstrates initiative:

"As an academic, there's an expectation that you'll research and teach but not necessarily that you'll engage. Doing engagement off your own back is therefore a great way to demonstrate initiative."

Aside from gaining professional skills, Valeska has seen her research trajectory shaped from engagement activities:

"I've had projects arise from talks that I've given where an interested industrial partner in the audience has followed up with me as, on hearing about my research, they recognised its relevance to their own area or problem that they're tackling."

Top tip:

"Before doing any engagement activity, do a bit of research on your audience so that you're better able to put yourself in their shoes and to target your activity and messages more appropriately. By doing some research, it'll ensure that you don't assume too much about the audience and that you deliver an activity that meets their needs."



Videos of her research online have drawn interest from across the globe; recently, Valeska was approached by researchers in America who were investigating a tangential area of interest and who wanted to keep her in the loop. Without engaging, Valeska would not have been able to develop the networks that she has.

The Learning:

As a Prize Fellow, Valeska has found engagement a valuable way to build her profile and so has made a conscious decision to make time for it; that does not mean that finding the time has been easy, and she has been strategic in choosing her engagement activities:

"I'm interested in activities that will reach the largest number of people as possible for the least input of time. It's about being efficient."

Valeska has noted that non-academic audiences are more likely to ask 'big picture' questions that may lie outside your particular research field. These questions are often informed by current issues in the media. For example, Valeska was recently questioned by an MP about fracking despite this being nothing to do with her own research:

"I've learnt that it's important to read around your area before engaging and to be as up-to-date as possible on current issues in the media so that you're able to field any questions thrown at you!"

"Having the support of others at the University (such as my mentor and Head of Department), to undertake engagement made it feel a justifiable, and valued, use of my time."