For Transforming Society

There is an issue with a lack of diversity and gender balance in science that is worsened by [the devaluing of science disciplines which are reaching gender parity](https://theconversation.com/more-women-in-a-stem-field-leads-people-to-label-it-as-a-soft-science-according-to-new-research-173724). Chemistry has a particular issue around the [retention and progression of women](https://www.rsc.org/new-perspectives/talent/breaking-the-barriers/). Whilst numbers of undergraduates studying chemistry are near 50% in the UK, the percentage of full professors who are women is <9%. To give context, in Physics, where <25% of all A level students are women, the percentage of full professors is still just under 9%.

Discrimination is, to use Kimberlé Crenshaw’s term, intersectional. This means that the barriers that people face, due to their gender, race, disability or any other protected characteristic, compound. In order to look at the challenges faced by women in chemistry, we also need to consider the challenges they may face due to their religion, sexuality, disability, or any other protected characteristic. We also need to acknowledge that it is not only women that face barriers, and that other marginalised genders such as trans men and non-binary people will face barriers too. Not all barriers are always taken into consideration, such as recent [diversity data from the ACS](https://axial.acs.org/2021/12/21/announcing-the-acs-publications-diversity-data-report-2021/) which does not even mention disability or chronic illness. However, disability, chronic illness, and neurodivergence are barriers to progression, and in the UK less than 1% of UKRI applications were made by individuals disclosing a disability (statistics were not shared for successful awards).

The international Women in Supramolecular Chemistry (WISC) network was launched by Dr Jennifer Hiscock, Dr Anna McConnell, Dr Cally Haynes and Dr Claudia Caltagirone in November 2019 with the aim to support the retention and progression of women in supramolecular chemistry. However, this network has now expanded to support other related minority groups. WISC also gave itself a remit to form a sense of community and kinship, taking an area-specific approach to improving EDI, and adopted qualitative research expertise into the network, [‘calling in’ the community](https://onlinelibrary.wiley.com/doi/epdf/10.1002/anie.202015297) to support its own.

WISC’s first action was to conduct a survey of the community, and all the activities undertaken have been led by what the community has asked for. To date, this has included a [website](http://www.womeninsuprachem.com/), a series of webinars on topics such as work life balance, careers outside of academia, and communicating science effectively together with vMASC (the Royal Society of Chemistry’s Macrocyclic and Supramolecular Chemistry Special Interest Group), a mentoring programme, and specific community clusters to support groups who are further marginalised. The community clusters include one focused on parents (including step-parents, foster parents, adoptive parents and prospective parents), one for disabled/chronically ill/neurodivergent people, and a new cluster for those who are 1st Gen into Higher Education. All the clusters are open to all genders.

WISC takes an inclusive feminist approach to research – deliberately using [embodied](https://www.bloomsbury.com/us/embodied-inquiry-9781350118799/) and creative research methods to allow people to share stories. Our programme of research incorporates collaborative autoethnography and reflexivity as well as more traditional qualitative online surveys. Our research spanned the initial global lockdowns in 2020-21, and so we were able to record [lived experiences of lab researchers through COVID-19](https://www.sciencedirect.com/science/article/abs/pii/S2451929422000018). However, our aim is to now go beyond this, and to become agents of change within chemistry and science with a model of how to do things differently.

In [our book](https://policy.bristoluniversitypress.co.uk/women-in-supramolecular-chemistry) we wanted to discuss the intersectional barriers that face women in academia generally and science specifically. We shared our own experiences, and created a series of fictional vignettes that were synthesised from two years of research data with women PIs, PhD students, postdocs, and the wider community. These vignettes were designed to share stories that came from the research, without exposing any one to the dangers associated with whistleblowing or complaining.

WISC is very determined to hold true to an intersectional feminist focus. At the moment we are engaged in a number of projects funded by the Royal Society (APX\R1\201170), UKRI (MR/T020415/1), RSC D&I funds and the Universities of Kiel and Kent. These include working with [Empowering Female Minds in STEM](https://www.empoweringfems.com/) to increase the visibility of Black women in chemistry and SciComm, with the [NADSN](https://www.nadsn-uk.org/) STEMM Action Group to create the virtual accessible chemistry lab of the future, and upcoming research on the barriers faced by 1st Gen scientists. We are expanding the model of support we have created for students in research groups led by women by adapting it to address issues of attrition among PhD students in a biosciences doctoral training partnership, and have been asked to bring our model of collaborative autoethnography project to women in biochemistry in South Africa, to support them as they negotiate the specific barriers they face there.

Everyone in WISC took on the work for the network over and above their day job. We are all committed to being part of something that addresses inequality and makes change for ourselves and the people that come after us.