

Ableism in Academia

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What is equity?

What is *not* equitable?

Models of disability

The predominant model of disability in science is the medical model of disability, which describes disability as a deficit of the individual, and allows disabled people to be seen as lesser or less human

In contrast, the social model of disability recognises that people are impaired by restrictions within their environment and/or society, and focuses on the physical and cultural changes needed to bring about equality

What is *not* equitable?

“In 2020 the employment rate for disabled people was 51.8%, compared to 81.6% for non-disabled people.”

TUC.org.uk

“Disabled people are made to feel grateful for having a job at all”

Frances Ryan, The Guardian, 2018

“Disability doesn’t make you exceptional, but questioning what you know about it does”

"That quote, 'the only disability in life is a bad attitude', the reason that's bullshit is ... No amount of smiling at a flight of stairs has ever made it turn into a ramp. No amount of standing in the middle of a bookshelf and radiating a positive attitude is going to turn all those books into braille."
— *Stella Young*



How many people are disabled?

Working population age 16-64



35% have a long-term health condition

22% are classed as disabled

9% are classed as disabled, limited a lot

Proportion of the population with a long-term health condition, classed as disabled, including those limited a lot, people aged 16 to 64 years, UK, 2021/2022 (Office for National Statistics)

In Higher Education



Academic staff
disclosing a disability or
chronic illness



“Only 25% of disabled researchers apply for funding across all disciplines, with the average success rate and award amount consistently lower for disabled researchers than non-disabled researchers”

TigerInSTEMM.org



UCU

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PAY GAPS: Higher education has a shocking record on equal pay



The gender pay gap in UK universities is 16%, whilst the disability pay gap is 9% and the race pay gap is up to 17%.



This is disgraceful from a sector which supposedly prides itself in equality



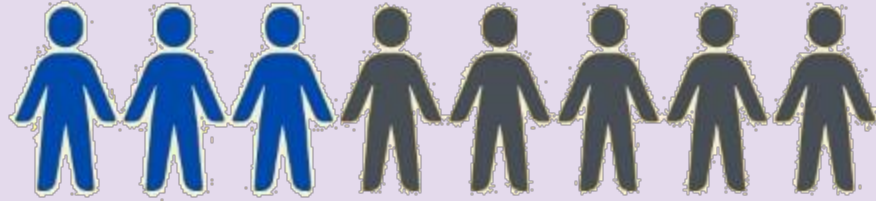
[#ucuRISING](#)

“The STEMM workforce is less diverse than the wider workforce”

(Report July 2021 All -Party Parliamentary Group on Diversity and Inclusion in STEMM | British Science Association)



Fewer STEM staff disclose than non-STEM staff, and this varies with discipline, career stage, and gender - e.g. 2.3% disclose in Agriculture and 5.3% in Medicine



Inaccessible Cultures

“I simply cannot work the long hours that I did before I was unwell. ... This makes it extremely challenging to be as productive as I used to be. I am certain that this will affect my ability to publish and “keep up” with my contemporaries, and so I suspect that this will affect how I am compared to others when applying for a permanent academic role and grants.”

(Female, ECR, Chemistry, Physical disability or health condition) Qualitative research on barriers to progression of disabled scientists; Report for The Royal Society, 2020.

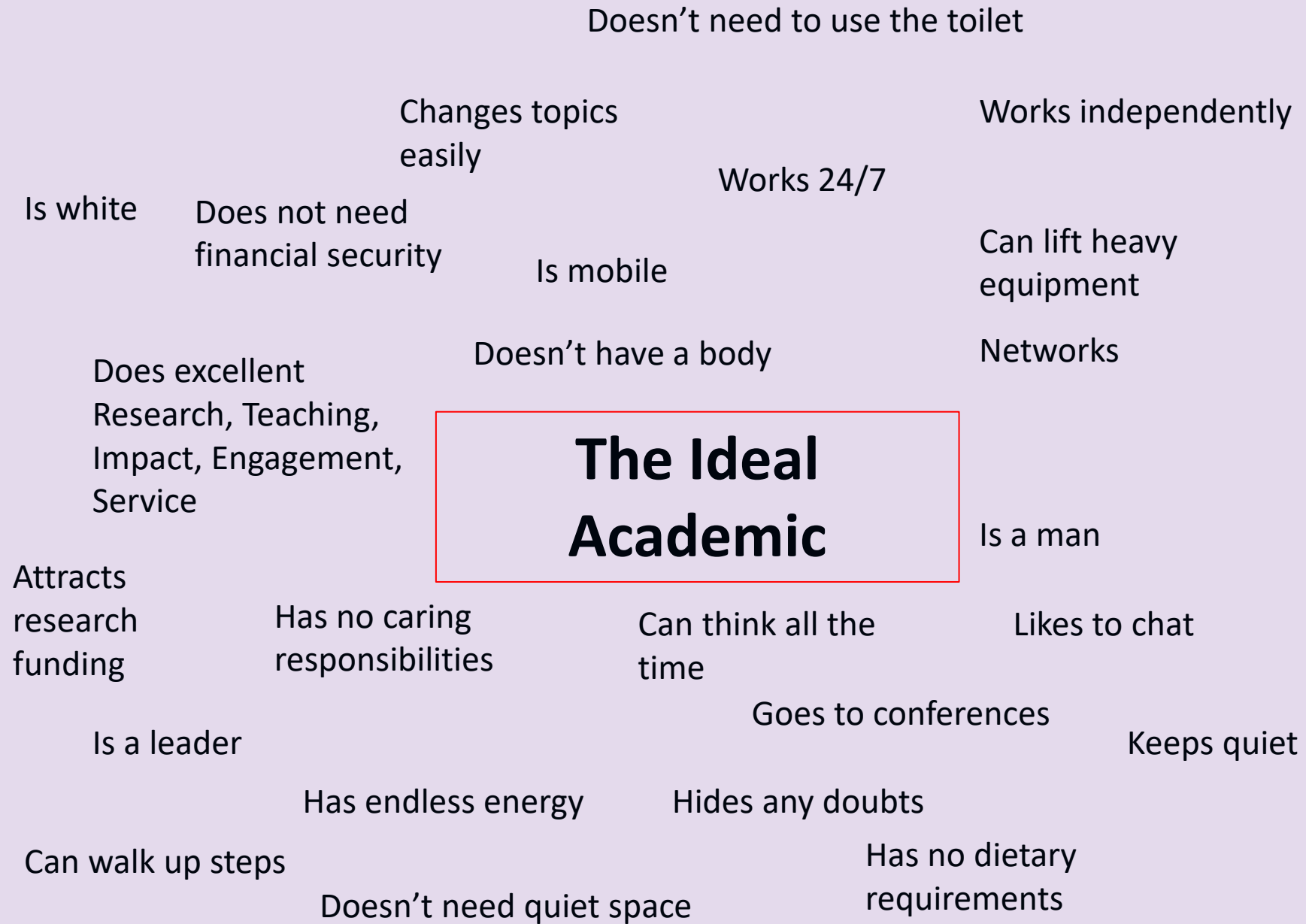
Staff report being stigmatised, challenged and questioned.

Some have been told not to pursue a career in academia as they would fail anyway in this environment.

“Ivory tower ableism is not accepting of illnesses, and there is a culture of not taking holidays or sick leave”
PhD student

“I stayed at the same university because of support, but will there be consequences for that?” “yes” PDRA

“I would really struggle to stay studying in a lab now”
Senior clinical scientist



Probability of equity in research



So what can we do?

Make disability ordinary

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My Activity Publications

Semi-Solid Samples for POPS Analysis

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The Future of Laboratory Chemistry Learning and Teaching Must be Accessible

Orielia Egambaram, Kira Hilton, Jennifer Leigh*, Robert Richardson, Julia Sarju, Anna Slater, and Bethan Turner

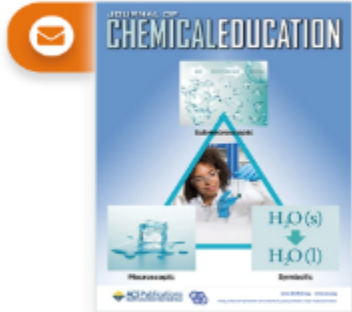
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SUBJECTS: Chemistry laboratories, Safety, Students, Teaching and learning methods, Testing and assessment



Journal of Chemical Education

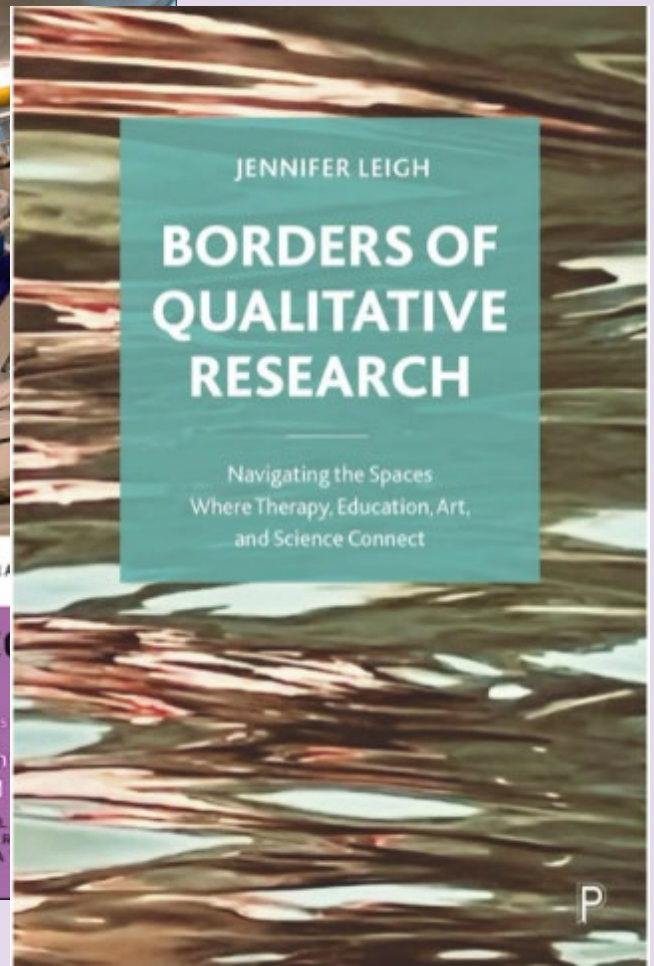
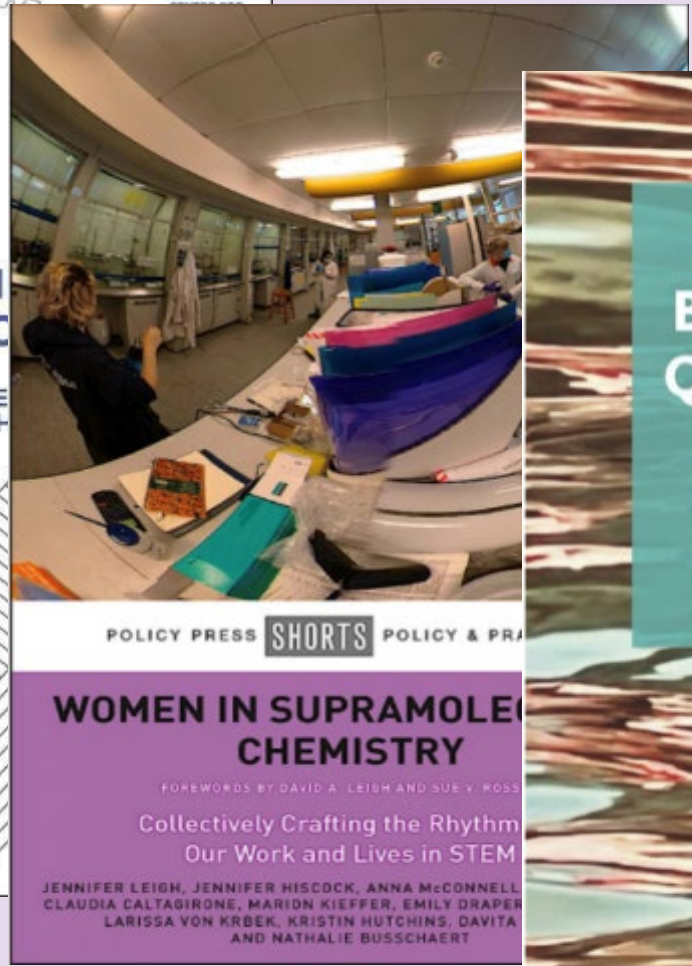
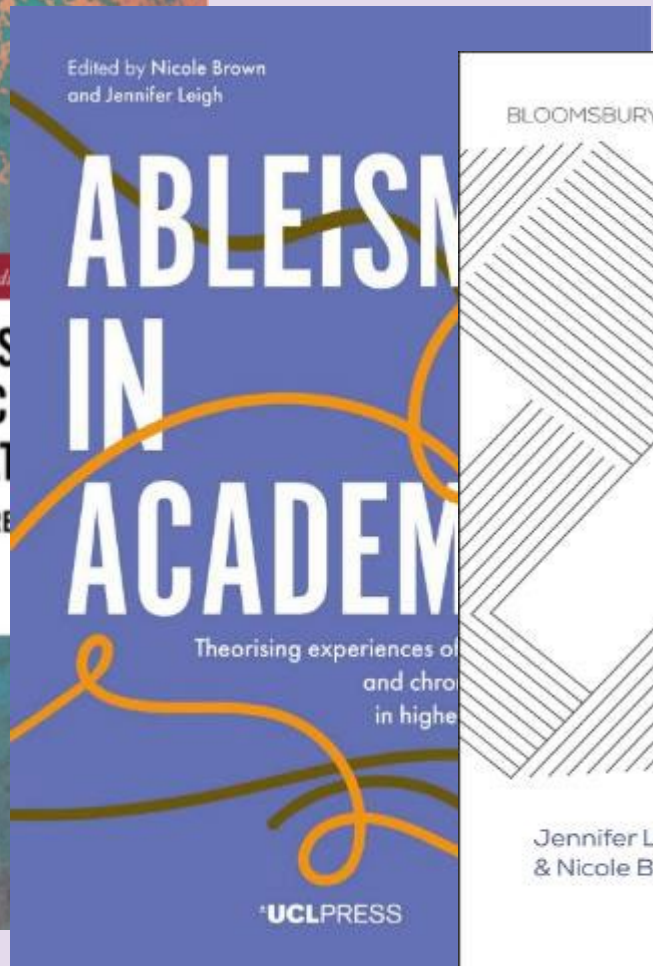
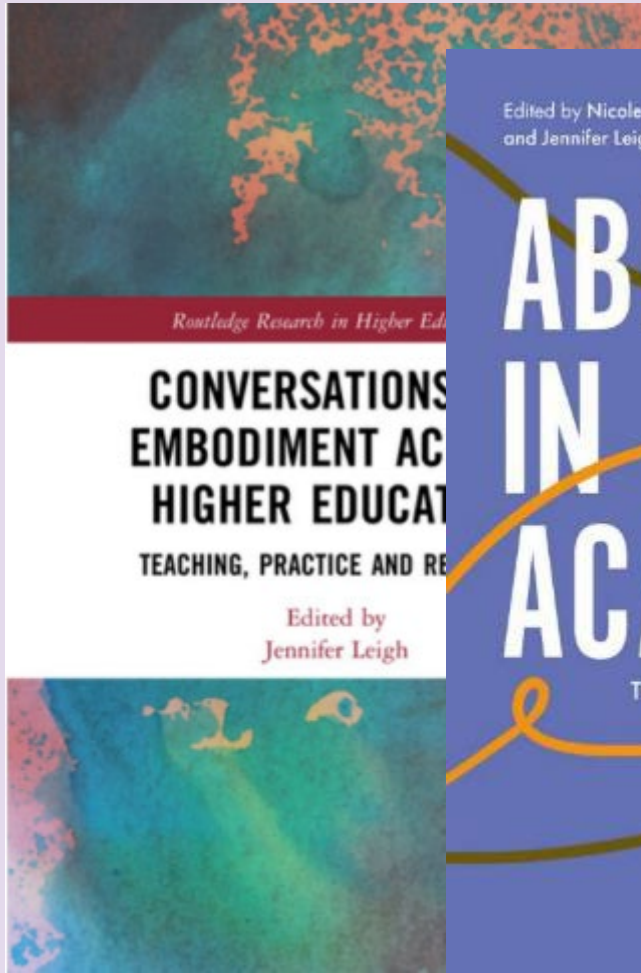
Abstract

This commentary is a call to make the future of chemistry laboratories accessible and inclusive. We draw from research and lived experience to put forward a list of recommendations for laboratory-based teaching. Our authorial team includes undergraduate and postgraduate chemistry students, graduate teaching assistants, teaching-focused and traditional research and teaching academics, and a Diversity Equality Inclusion (DEI/EDI) academic expert. We all have lived experiences of disability, chronic illness, neurodivergence, and other marginalizations related to race, religion, sexuality, or other characteristics. We believe that laboratory-based chemistry learning environments, teaching, assessment, and resources should be accessible to all students and staff.

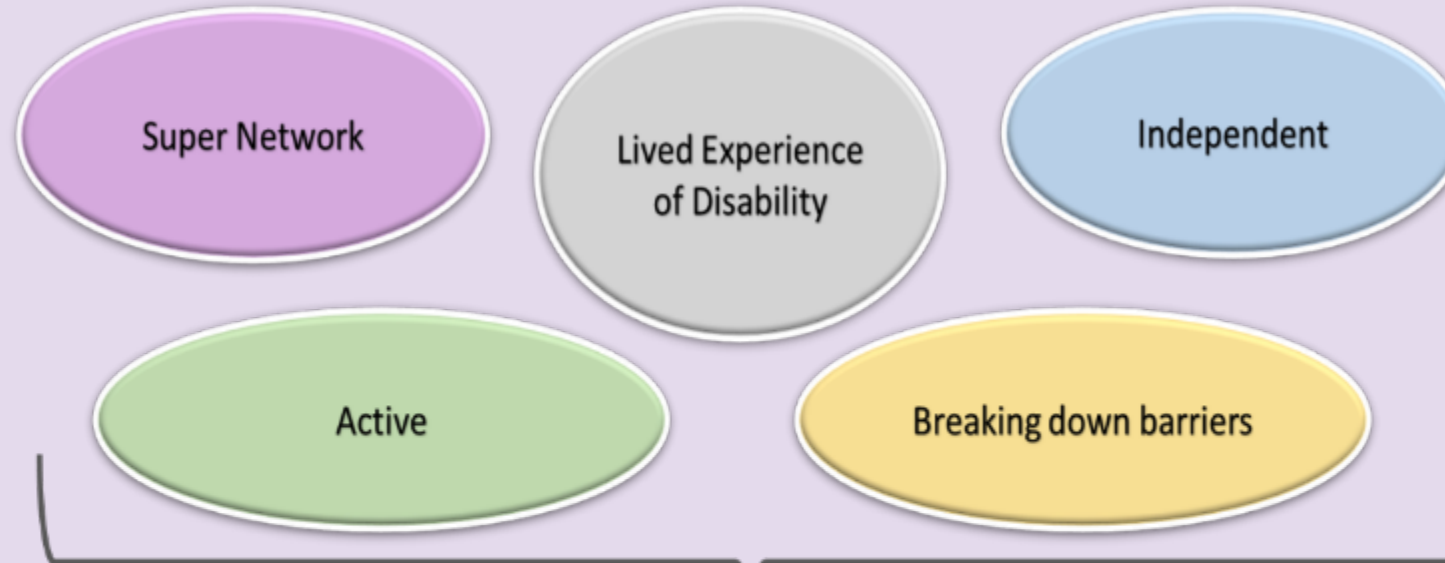


KEYWORDS: First-Year Undergraduate/General, Second-Year Undergraduate, Upper-Division Undergraduate, Graduate Education/Research, Laboratory Instruction, Safety/Hazards

Use inclusive research approaches

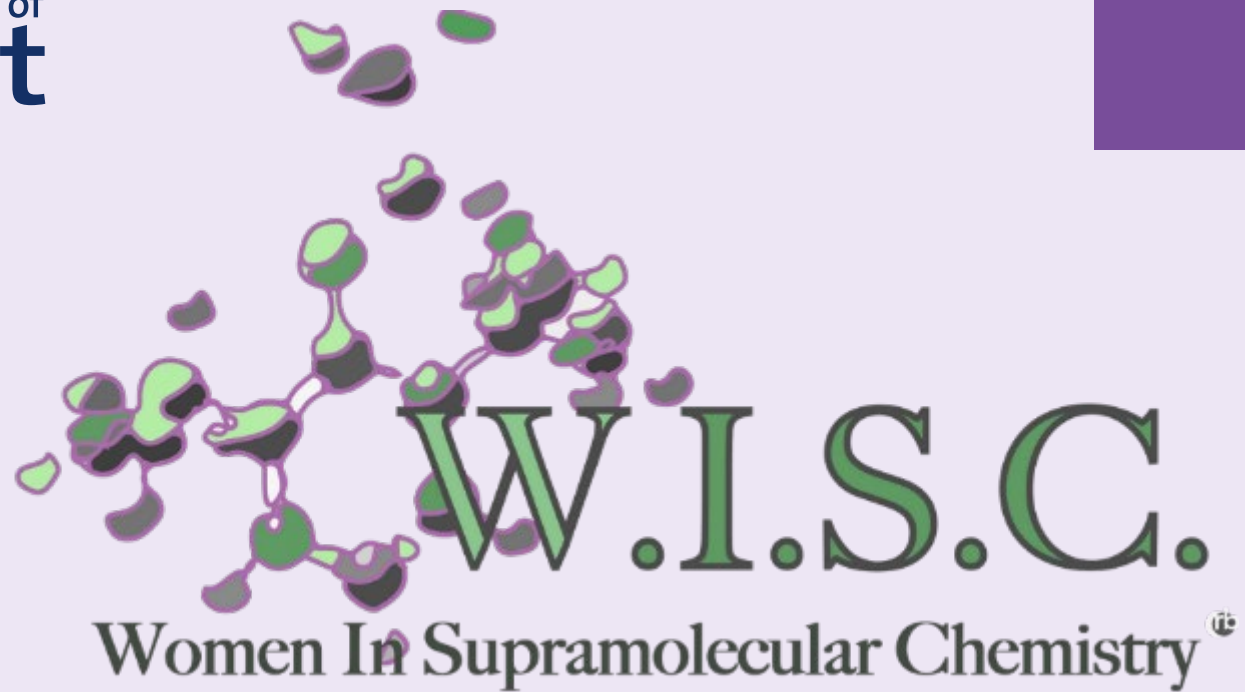


National Association of Disabled Staff Networks (NADSN)



NADSN





Diversity, Equality, and Inclusion

An Area-Specific, International Community-Led Approach to Understanding and Addressing Equality, Diversity, and Inclusion Issues within Supramolecular Chemistry

Claudia Caltagirone, Emily R. Draper, Michaele J. Hardie, Cally J. E. Haynes, Jennifer R. Hiscock, Katrina A. Jolliffe, Marion Kieffer, Anna J. McConnell, and Jennifer S. Leigh*

Keywords: DEI · EDI · gender · marginalisation · supramolecular chemistry

Abstract: Diversity, equality, and inclusion (DEI/EDI) are pressing issues in chemistry and the natural sciences. In this Essay we share how an area-specific approach is “calling in” the community so that it can act to address EDI issues, and support those who are marginalised. Women In Supramolecular Chemistry (WISC) is an international network that aims to support equality, diversity, and inclusion within supramolecular chemistry. WISC has taken a field-specific approach using qualitative research methods with scientists to identify the support that is needed and the problems the supramolecular community needs to address. Herein, we present survey data from the community which highlight the barriers that are faced by those who take career breaks for any reason, a common example is maternity leave, and the importance of mentoring to aid progression post-PhD. In conclusion, we set out an interdisciplinary and creative approach to addressing EDI issues within supramolecular chemistry.

Inclusion (DEI/EDI), and the accompanying actions that will achieve change to be brought into the mainstream.^[1a,b] A slew of chemistry editorials have appeared setting out the need for the discipline to address issues of sexism and racism, and to move beyond words and into action.^[2a-d] In this Essay we will share how, in one field—Supramolecular Chemistry—we have initiated a new network that is listening to the needs of the community, then bringing this community together to support marginalised scientists. Marginalisation can come about for a multitude of reasons, and within academia it is often thought to correlate with characteristics of the individual such as colour, ethnicity, disability, class, and access.^[3a,b] In terms of gender, it is well-established that women in academia are disproportionately affected by funding structures, aca-

[*] The E here has been denoted by “equality”, as that is the term used by the UK government and many UK Higher Education Institutions.

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@SupraChem

Members of the Women In Supramolecular Chemistry (Wisc) network board

Calling in support

An inclusive, rigorous strategy for improving equality and diversity

We can all think of instances where members of the scientific community have been called out on inappropriate behaviour or language. Calling out is a direct challenge to another. As such, it can be an intimidating thing to do, as standing up to someone senior to you and telling them that what they are doing is not OK requires a lot of emotional labour. Additionally, there may be unintended consequences to your career.

The converse is that being called out can feel threatening. Particularly if you do not understand the transgression you have been accused of, or were doing your best to be supportive of equality, diversity and inclusivity (EDI) issues. Fear of a reaction might inhibit someone from trying to get involved in EDI work. Additionally, responses to being called out are quite often defensive, and can result in behaviour, arguments or actions that become even more hurtful to those who are doing the calling out. However, there is still a need to raise EDI issues, including those around gender (though this must always be considered intersectionally).

Things have come a long way since 1988 when Sharon Traweck described the laboratory as ‘a man’s world’, but the chemical sciences still have a particular issue with the retention and progression of women. In 2018, the Royal Society of Chemistry’s *Diversity Landscape of*

this lack of diversity among scientific leaders may mean that research has bias and flaws that are unintentional and undetected.

The international Women In Supramolecular Chemistry (Wisc) network has taken a creative and reflective approach to humanise the reasons why equality work is critical. In 1979, Audre Lorde, a self-proclaimed Black feminist, poet and warrior, said if we want to change things, we need to do them differently. We aspire to be an agent of change. Instead of calling out, Wisc ‘calls in’. Rather than pointing the finger at others, calling in is an invitation to discuss something that might be uncomfortable in a safe environment without fear of getting it wrong, and then to pull together the community as a whole to make positive changes.

All too often, EDI work is approached from a general perspective but each field has its own specific context and challenges. This is why Wisc focused on supramolecular chemistry and not women in the whole of chemistry (or Stem). We were also cautious of projecting our own experiences and assumptions onto others. Therefore, we set out to survey members of the supramolecular community to ask what their perceptions of marginalisation were, what their opinions were on a number of different proposed initiatives, and what they would like to see happen to support those who are marginalised.

these kinds of research techniques. So, just as a chemist wanting to test out a new compound on a cell line would collaborate with a bioscientist, Wisc co-opted an ‘insider’ social scientist onto the board to ensure that this research was carried out with the community, and with due regard to rigour, validity and ethics. It can be intimidating to talk openly about personal lives while academia remains a stereotypically masculine place where children, relationships and personal problems are not meant to intrude. However, many people felt able to share their stories with us, validating our approach.

Respondents wanted mentoring, more visibility for women and marginalised groups, and confirmed that career breaks and the transition towards becoming an independent principal investigator are crucial times when extra support or guidance is needed if we want to ensure women can progress.¹ Wisc has also received overwhelming support from those most senior in the field, with words of encouragement and offers to mentor more junior colleagues, showing that the deliberately inclusive and non-confrontational approach of ‘calling in’ the community is working.



Wisc only launched in November 2019, and we are at the beginning of our work. We are following up the survey with a mentoring scheme, a second survey exploring experiences

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BACKSTORY | VOLUME 8, ISSUE 2, P299-311, FEBRUARY 10, 2022

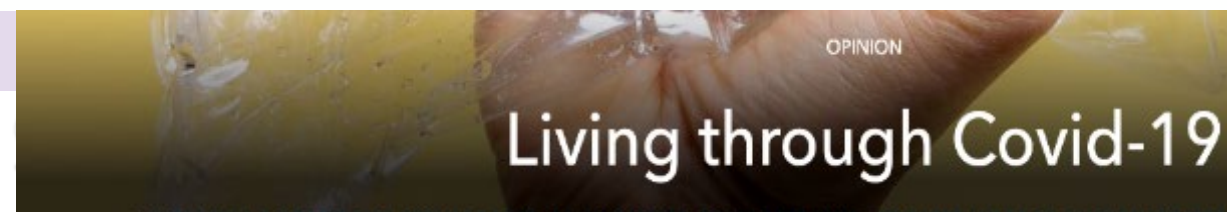
Managing research throughout COVID-19: Lived experiences of supramolecular chemists

Jennifer S. Leigh   • Jennifer R. Hiscock • Sarah Koops • ... Larissa K.S. von Krbek • Katrina A. Jolliffe •
Michele J. Hardie • [Show all authors](#)

Published: February 02, 2022 • DOI: <https://doi.org/10.1016/j.chempr.2022.01.001> • [Check for updates](#)



The international Women in Supramolecular Chemistry network believes that taking an area-specific approach effectively supports equality, diversity, and inclusion. Science lacks diversity, and this is intersectional. We share effects of coronavirus disease 2019 (COVID-19) by triangulating findings from an online survey, a collaborative autoethnography, and reflective group research meetings. We show how qualitative research *with* the community offers insights into challenges and supports individuals, and we demonstrate that research leaders have often taken responsibility for their teams' mental health and well-being at the cost of their own.



Many researchers are now feeling the effects of additional emotional burdens

The Covid-19 pandemic has been labelled a [mass global trauma event](#), with all-encompassing effects similar to that of the second world war. It remains too early to estimate the full impact of these events on the health or career progression of marginalised individuals, but early results highlight that many experienced significant challenges.

The international Women in Supramolecular Chemistry (Wisc) network began a programme of research into lived experiences of life inside and outside the lab in September 2020. Although it had not been designed to capture Covid experiences, the timing meant that it was perfectly situated to do so. The chemical science community shared the general shock of lockdowns and lab closures, with the corresponding challenges of home-schooling, isolation and keeping research groups going. To capture the emotional and embodied experiences that these situations produced, Wisc used a [variety of creative and qualitative research methods](#).¹ These data were collected through reflective work with research groups and collaborative autoethnography, alongside qualitative surveys that received responses from supramolecular researchers across five continents.

Autoethnography is the study of the self in relation to the social environment and context. It is commonly used to explore subjects that are sensitive, contentious and that have personal meaning to the researcher.² Autoethnography demands a lot from a researcher more used to methods from within the chemical sciences. It interprets validity, rigour and repeatability differently; for example, an autoethnographic study gains validity by the researcher reflecting on their part in events and the [impact and implications](#) their actions

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Pregnancy in the lab

[Anna Slater](#), [Claudia Caltagirone](#), [Emily Draper](#), [Nathalie Busschaert](#), [Kristin Hutchins](#) & [Jennifer Leigh](#) 

[Nature Reviews Chemistry](#) (2022) | [Cite this article](#)

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No matter your career stage, pregnancy in the lab raises complex questions – and definitive answers are hard to come by. In conversation with members of [Women in Supramolecular Chemistry \(WISC\)](#), we share our experience, discuss research into the challenges and move the conversation to the support needed by people who are pregnant. We conclude that community is critical to improve experiences.

It's a question we are asked as mentors, and it's a question many of us have asked ourselves: how can I combine pregnancy and parenthood with my lab research and career? The questions proliferate from there (Fig. 1) and unless we know people who have been there before, answers can be hard to find.

Pregnancy in the Lab

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Planning a family

[Jennifer S. Leigh](#), [Nathalie Busschaert](#), [Cally J. E. Haynes](#), [Jennifer R. Hiscock](#), [Kristin M. Hutchins](#), [Larissa K. S. von Krbek](#), [Anna J. McConnell](#), [Anna G. Slater](#), [David K. Smith](#) & [Emily R. Draper](#) 

[Nature Reviews Chemistry](#) 6, 673–675 (2022) | [Cite this article](#)

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To write this article, we spoke to members of the supramolecular chemistry community including the [International Women in Supramolecular Chemistry network](#). We are not attributing anyone's name to their story to protect their anonymity.

We have all either been asked or seen others asked: "So when are you going to have children – at family gatherings, as a casual aside by colleagues or even by complete strangers. Then societal judgement around having children, not having children, when to have children and how many children to have. Even if we put aside the recent US Supreme Court decision to overturn *Roe v Wade*, 1973 and with it remove long-held rights around access to abortion in

Planning a Family


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Listening to fathers in STEM

[Jennifer S. Leigh](#), [David K. Smith](#), [Barry A. Blight](#), [Gareth O. Lloyd](#), [Charlie T. McTernan](#) & [Emily R. Draper](#) 

[Nature Reviews Chemistry](#) 7, 67–68 (2023) | [Cite this article](#)

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To write this article, Emily Draper and Jennifer Leigh from the International Women in Supramolecular Chemistry (WISC) network again joined forces with David Smith and asked dads working within the field of supramolecular chemistry to share experiences around parental leave.

When we think about the career impact of having a family, or how to manage the practicalities of parenting as a chemist (or scientist), the conversation has historically tended to focus on the mother, maternity rights, and a mother's need to balance family life with the scientific life. But what about fathers?

Listening to Fathers



Women In Supramolecular Chemistry: Collectively crafting the rhythms of our work and lives in STEM

(2022) Bristol: Policy Press.

Available Open Access from:

<https://policy.bristoluniversitypress.co.uk/women-in-supramolecular-chemistry>

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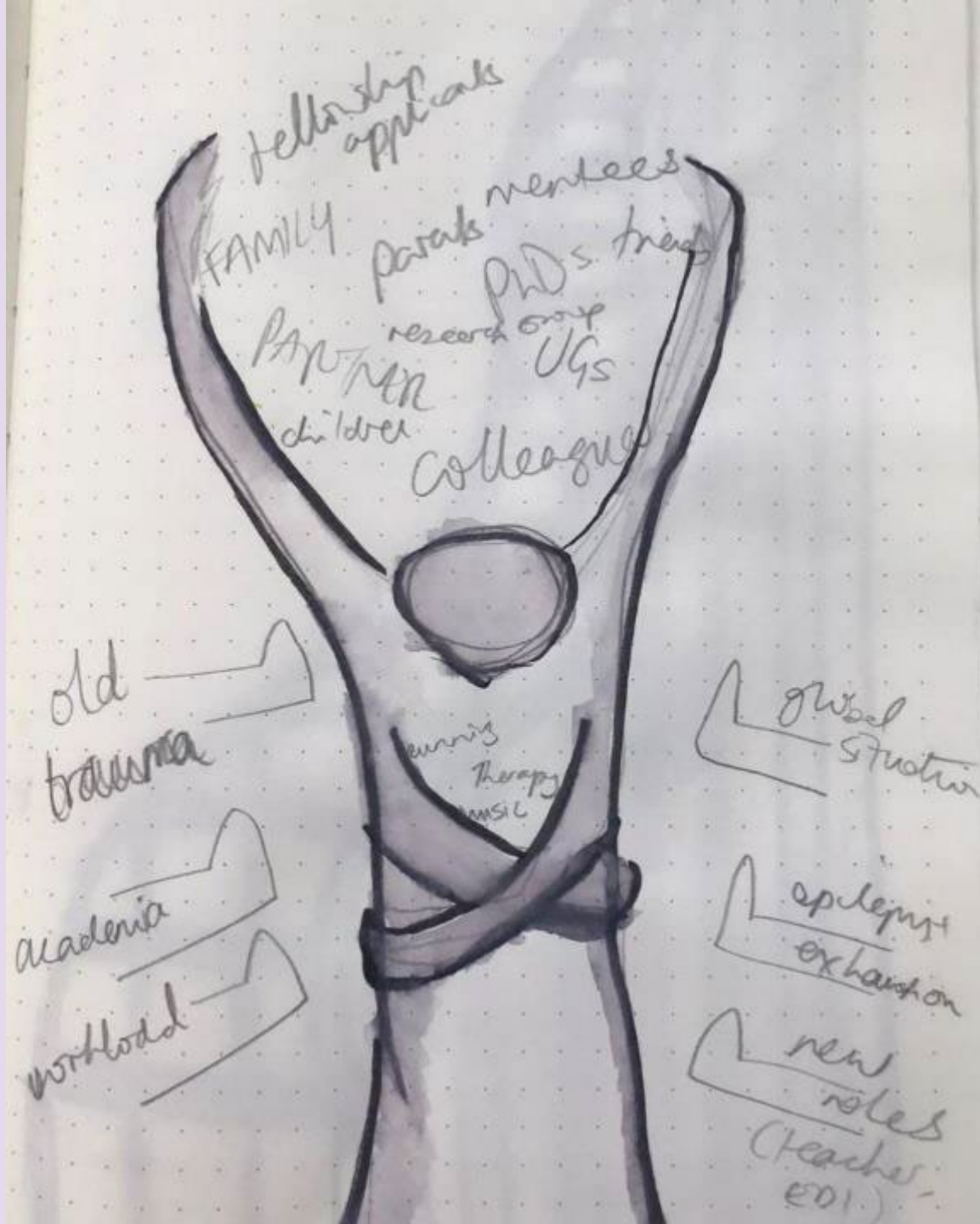
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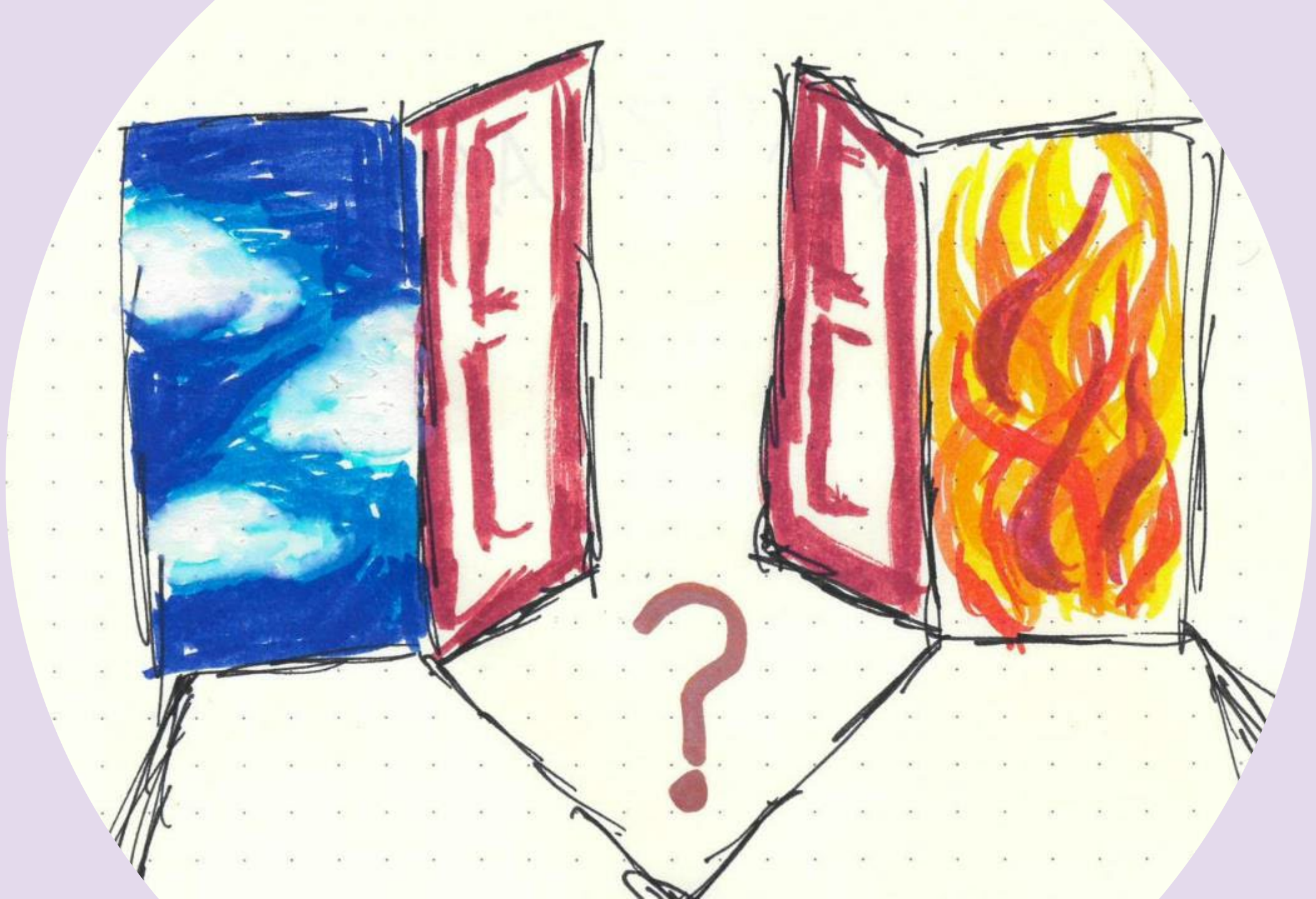
Collectively Crafting the Rhythms of
Our Work and Lives in STEM

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**Thank
You.**

