



# Disability-Inclusive Laboratories in the Chemical Sciences

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Making chemistry accessible for everyone

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# Foreword



**The laboratory is the beating heart of chemistry. It's where ideas are tested, boundaries are pushed, and curiosity is transformed into discovery. Whether that laboratory takes the form of a benchtop, a fume hood, or a computer screen, it is the space where chemistry comes alive.**

For many of us, our earliest experiences in the lab are more than just memories – they're the moments that sparked a lifelong passion for science. These spaces have long served as homes for experimentation, collaboration and inspiration.

Unfortunately, not everyone has equal access to that experience.

For disabled chemical scientists, the lab can be a place of exclusion rather than opportunity. Physical barriers, inaccessible design and organisational cultures that overlook diverse needs can turn what should be a space of possibility into one of limitation. That is not only deeply unfair, but a significant loss for chemistry as when we exclude people, we lose talent, creativity and perspective, and ultimately diminish the richness of our scientific community.

History has shown us that disability does not have to be a barrier to great science - just look at chemistry Nobel Prize winners Dorothy Hodgkin and Sir John Cornforth, who broke new ground despite severe arthritis and deafness respectively. Similarly, physicist Stephen Hawking is another prime example of how accessible adjustments can enable a talented individual to continue pursuing world-changing discoveries.

If we fail to create more inclusive working environments, the reality is that we might continue to miss out on exceptional minds whose work can change the ways in which we view and interact with our world. It is crucial the chemical sciences community invests in creating inclusive and accessible workspaces to ensure talented people can flourish.

The findings of our research presented in this report are both sobering and invigorating. They reveal the lived experiences of disabled chemists, which are stories of resilience, determination and opportunities for equity. They also showcase practical, achievable solutions that make our field fairer. From height-adjustable fume hoods to assistive technologies to the establishment of disabled staff networks, many of the tools we need to transform our laboratories already exist and have the potential to benefit all lab users.

Accessible design can be thought of in the same way as one might think of a dropped kerb – a simple adjustment that enables wheelchair access, but also helps people with prams, delivery workers with trolleys and cyclists navigating busy streets. What begins as an accommodation becomes a universal improvement. The same principle applies in a chemistry laboratory. When we design for inclusion, we create environments that are safer, more flexible and more efficient for everyone.

This report is not a call to overhaul labs at great expense. It is instead a call to apply the same creativity, problem-solving and collaborative spirit that defines chemistry itself to the spaces in which we work. Inclusion should be embedded from the outset, not bolted on as an afterthought.

At the Royal Society of Chemistry, we believe that chemistry is not only about discovery – it is also about inclusion and belonging. Research shows that inclusion and diversity strengthen science, drive innovation and secure the long-term success of chemistry – which is why, as the professional body for the chemical sciences, we are committed to championing this cause across our community. That's why we've developed a series of recommendations for stakeholders across the chemical sciences. Because meaningful change requires a community-wide effort and because every scientist deserves the chance to thrive.

This report is more than a reflection on work already done – it is a roadmap for everyone connected to the chemistry community that outlines what we still must do. We invite all readers – scientists, educators, funders and policymakers – to engage with its insights and act on its recommendations.

Science is, by its nature, a pursuit of progress but it must also serve people. We have an opportunity and a responsibility to ensure that our advances benefit everyone in our community, because when we remove barriers, we unlock potential. And when we design for inclusion and equity, we design for innovation and excellence.

A handwritten signature in black ink, appearing to read 'Helen Pain'.

**Dr Helen Pain MBE CChem FRSC**  
Chief Executive Officer, the Royal Society of Chemistry

# Executive summary

**Disability inclusion in the chemical sciences is not only a matter of fairness – it is fundamental to the integrity, innovation and sustainability of the discipline. Chemistry laboratories are central to scientific learning and discovery, yet many remain inaccessible to disabled scientists, students and staff.**

This report explores the physical, systemic and cultural barriers faced by those individuals in laboratory environments and outlines practical, evidence-based recommendations to address these issues and foster inclusion across the sector. Among the considerations when preparing this report was the fact that there are many with invisible disabilities that must also be considered if chemistry is to get the most out of its workforce.

Drawing on more than 400 survey responses, 29 case studies and 15 interviews, the report provides a detailed picture of the current landscape and highlights opportunities for meaningful change. It is intended for stakeholders from fields including academia, industry, funding agencies and policy, and aims to support the development of inclusive laboratory spaces and cultures where all chemists can thrive.

## Key challenges and lived experiences

Evidence gathered for this report highlights several complex and interwoven issues that must be addressed by stakeholders across the sector:

- Physical barriers in laboratory design – such as fixed-height benches, narrow walkways and inaccessible equipment – exclude many individuals with physical or mobility challenges.
- A burden of advocacy is often placed on disabled individuals to make up for organisational shortcomings, such as a lack of awareness, inconsistent support and reactive processes.
- Wider cultural challenges persist including stigmas, bullying and discrimination, with disabled respondents reporting lower levels of belonging and job security.
- Career inequality, underrepresentation and lower levels of career satisfaction are all evident in statistics. Disabled individuals in the chemical sciences are less likely to hold senior roles, while they also face more and greater obstacles to career progression.

Furthermore, research showed that many disabled chemists have been forced to adapt their career paths to avoid inaccessible lab environments – a shift that, while resourceful, underscores the urgent need for structural change. The intersectionality and overlapping of identifying characteristics, such as gender, ethnicity and disability status, has also been found to exacerbate already troubling situations, which adds an extra layer of complexity.

These experiences are not isolated, either. The breadth of these experiences indicates that, despite legislative efforts to improve inclusion and address some of these issues, problems remain and in fact could be systemic in nature.

Data shows that fewer disabled respondents feel a sense of belonging in the chemistry community than their non-disabled counterparts (73% v 81%), while the numbers back up stories told during interviews that paint a picture of a two-tiered chemistry community.

## Opportunities for change and recommendations

The report provides a clear and practical roadmap for improving disability inclusion in chemistry laboratories. It contains recommendations grounded in the lived experiences of disabled chemists and shaped by the insights of a diverse community of contributors, with a view to reimagining how labs can work better for everyone.

At the core of the transformation agenda laid out by the report are five fundamental principles:

1. Accessibility is built into every aspect of laboratory design
2. Inclusive culture is part of everyday laboratory life
3. Disabled people are empowered and influential within laboratories
4. Allyship and shared responsibility strengthen inclusion
5. Systems and policies sustain lasting accessibility and inclusion

These have been used to develop a total of 15 recommendations for five different stakeholder groups detailed below.



**Disabled lab users, their managers and supervisors** need clear, accessible guidance on how to request adjustments and access support. Encouraging each other to engage with staff networks and peer support groups is important for advocacy purposes and can help to build a shared sense of community. Everyone within this stakeholder group should also feel they are able to contribute to the shaping of inclusive lab environments through co-design and advisory roles.



**Non-disabled lab users** also have a responsibility to foster inclusion. This starts with listening – instead of leaning on assumptions, asking respectfully about colleagues' needs and deferring to their expertise can be key to identifying effective solutions. By understanding, supporting and leading inclusive practices, participating in disability awareness training, and being visible allies, they can also help normalise accessibility and build a more welcoming culture.



**Buildings and facilities managers, and department heads** have considerable influence on laboratories within their workspaces and can help shape how they function. They must therefore conduct regular accessibility audits, factor inclusive design into renovations and procurement, and communicate clearly around adjustments to ensure labs are usable and safe for everyone.



**Organisational culture leaders** help set the tone for inclusion, so promoting accessibility as a strategic priority and shared responsibility is vital. Sharing learning across departments and supporting staff networks can reinforce the need to ensure the workplace is appropriate for all. Understanding and acknowledging the challenges faced by disabled workers helps build a more empathetic and equitable workplace, and staff would be encouraged and rewarded for developing and demonstrating inclusive behaviours.



**Policymakers and funders** have the power to drive sector-wide change. By establishing and enforcing minimum accessibility standards, encouraging inclusive design and requiring institutions to report on inclusion and bullying, they can help ensure that accessibility is built into the foundations of scientific practice.

# Chapter 1: Introduction

## Why inclusion matters

**Creating disability inclusive chemistry laboratories is a legal and ethical responsibility. It is also essential for excellence, innovation and equity. Accessible environments benefit everyone, not just disabled people. Public sector bodies and community stakeholder groups, as well as the Royal Society of Chemistry (RSC),<sup>1,2,3</sup> have already demonstrated that inclusive design improves safety, supports collaboration and enables a wider range of scientific contributions.**

Despite this, disabled scientists continue to face barriers when working in chemistry labs. These include inaccessible lab layouts, inflexible equipment and lab procedures and organisational cultures that do not accommodate diverse needs.

We have carried out a survey, conducted interviews and built a case studies collection to better understand these challenges, share good practices and recommendations to create more inclusive and accessible chemistry laboratories.

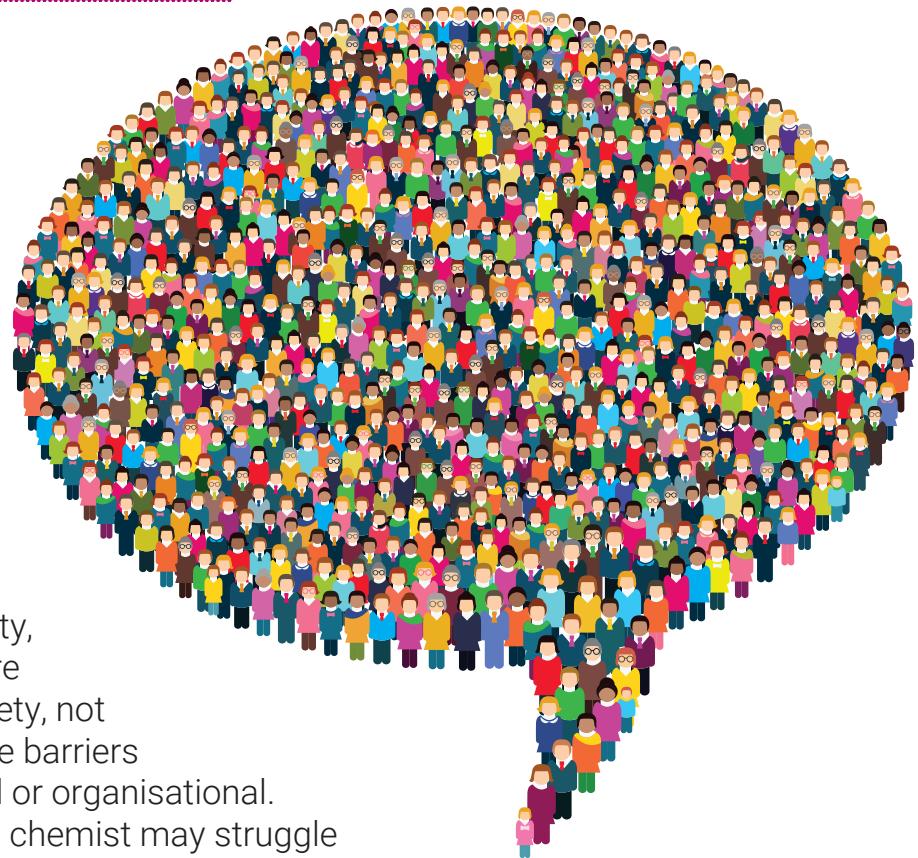
<sup>1</sup>RSC (2024a). Disability History Month: Chemistry Loses Out If We Exclude Disabled Talent. Royal Society of Chemistry - <https://www.rsc.org/news/2024/december/disability-history-month-chemistry-loses-out-if-we-exclude-disabled-talent>

<sup>2</sup>UK capabilities in inclusive design of the built environment (2024) <https://www.gov.uk/government/publications/built-environment-uk-capabilities-in-inclusive-design/uk-capabilities-in-inclusive-design-of-the-built-environment-html-version>

<sup>3</sup>NADSN stem White paper (2025) - [https://www.nadsn-uk.org/wp-content/uploads/2025/04/NADSN\\_STEMM\\_White\\_Paper\\_090425-v0.3.pdf](https://www.nadsn-uk.org/wp-content/uploads/2025/04/NADSN_STEMM_White_Paper_090425-v0.3.pdf)

## NOTE ON TERMINOLOGY

We know different individuals and communities have different preferences when it comes to disability-related language. While there is no perfect wording to fit everyone's preferences, the language we use in this report aims for consistency, clarity and inclusivity, and is underpinned by the 'social model' approach to disability, which states that people are disabled by barriers in society, not by their impairments. These barriers may be physical, attitudinal or organisational. For example, a colour-blind chemist may struggle to interpret red-green graphs. The issue is not the impairment, but the design choice that excludes certain users.



'Disability' in this report is shorthand for any form of long-term health condition, impairment, or difference which substantially impacts someone's daily life. When reporting on the survey responses, we use the term 'disabled survey respondents' to refer to respondents who answered in at least one of three introductory questions that they either:

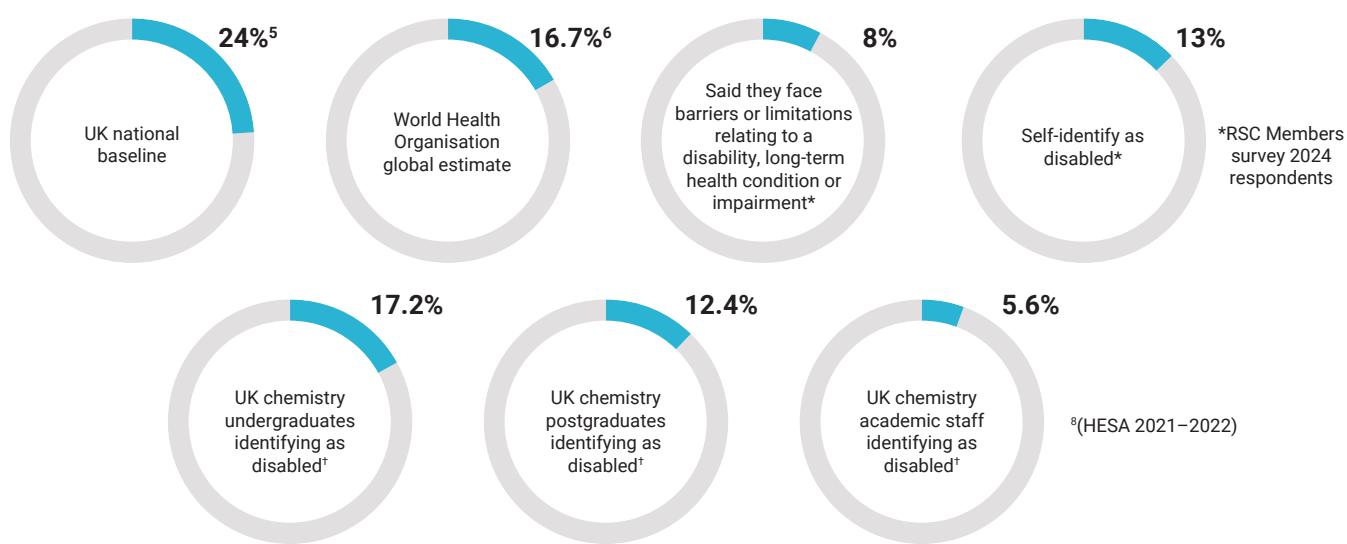
- identified as a disabled chemist/someone with personal lived experience of accessibility issues;
- self-identified as a disabled person; or
- experienced barriers or limitations in day-to-day activities relating to disability, long-term health condition or impairment. It is important to recognise that inclusive language is not static. Rather, it continues to evolve, and the terms and expressions regarded as disability-inclusive in 2025 may be subject to change over time.

## The case for disability inclusion

Quantitative research findings drawn from the RSC's Member surveys, Pay and Reward Report and HESA data<sup>4</sup> paint a clear picture: the chemical sciences are not retaining disabled talent, and participation from disabled individuals is disproportionately low.

These disparities are not simply statistical. They reflect lost potential, reduced diversity of thought, and a narrowing talent pipeline of future chemists.

Percentages of disabled people in chemistry, compared with the wider population



Median salary for chemists working full-time<sup>7</sup>

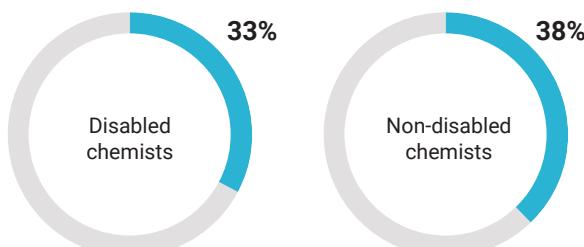
£45,300

Disabled chemists

£52,435

Non-disabled chemists

Percentage of chemists holding positions with a high level of responsibility<sup>7</sup>



Disabled chemists are less likely to...



...consider their job challenging or stimulating



...say their current job makes full use of their skills



...feel secure in their role



...feel they can be themselves at work

<sup>4</sup>RSC (2023) Disability in the chemical sciences. <https://www.rsc.org/policy-and-campaigning/science-culture/disability-in-the-chemical-sciences>

<sup>5</sup>UK Parliament (2024). UK disability statistics: Prevalence and life experiences. <https://commonslibrary.parliament.uk/research-briefings/cbp-9602/>

<sup>6</sup>World Health Organization (2023). Fact sheets: Disability. <https://www.who.int/news-room/fact-sheets/detail/disability-and-health>

<sup>7</sup>RSC (2023) Pay and Reward Report. What do chemists earn? <https://www.rsc.org/funding-and-support/careers/working-in-the-chemical-sciences/what-do-chemists-earn>

<sup>8</sup>HESA (2022). Retrieved from <https://www.hesa.ac.uk>

## Why is the RSC carrying out this work now?

Without support mechanisms to increase disability inclusion, the chemical sciences in the UK risk:

- a shrinking workforce that cannot meet the UK's growing and global demand for chemical expertise.
- a loss of innovation capacity, as underrepresented voices and perspectives are excluded.
- widening inequalities that undermine both social mobility and public trust in science.

The RSC's mission is to advance chemical knowledge in a manner that is equitable, accessible and sustainable. By acting now, we can build an evidence base that can influence government, industry and education providers.

The research presented in this report aims to provide evidence-based insights on the current landscape for disability inclusion in chemistry laboratories, understand the barriers that discourage talented individuals from entering or staying in the profession and sharing examples of good practices to make the chemistry laboratory more accessible and inclusive.



## Neurodiversity in the chemical sciences

Neurodiversity refers to natural differences in brain function and behaviour. Neurodivergent individuals, such as those with autism, attention-deficit hyperactivity disorder (ADHD), dyslexia or dyspraxia, can bring unique strengths to chemistry, including creativity, visual reasoning and attention to detail.<sup>9</sup>

In the RSC 2024 Member Survey,<sup>10</sup> over 26% of disabled respondents identified as neurodivergent. However, many face exclusion due to environments and practices designed for neurotypical norms. Common challenges include difficulties accessing support, masking traits and managing memory and concentration.

The RSC Inclusion and Diversity Fund,<sup>11</sup> funded by the Chemists' Community Fund,<sup>12</sup> has supported community-driven projects that use actionable, evidence-driven approaches to break down barriers for neurodiverse scientists. Examples include:

- **Elements for Inclusion** shared the life stories of four successful neurodivergent chemists, highlighting both the barriers they faced and the strategies they used to thrive. By showcasing these narratives, the project demonstrated the value of cognitive diversity to the discipline and underscored the need for inclusive design in education and employment. The findings reinforce that chemistry benefits from a range of neurotypes, as diverse cognitive approaches drive problem-solving, creativity, and innovation.
- Scottish Water, with support from Genius Within, responding to staff demand for greater inclusivity by **embedding neurodiversity awareness and practical adjustments into its workplace**. The project delivered targeted training, improved policies, and early culture change towards openness and understanding. Demonstrating the value of combining awareness with practical, tailored adjustments, showing that sustainable neuroinclusion depends on leadership buy-in, feedback loops, and embedding practices into everyday operations. This approach not only supports neurodivergent staff but also strengthens organisational resilience, creativity and innovation.

Intersectionality also plays a role. Neurodivergent individuals who belong to other marginalised groups, such as women, LGBT+ people or those from minoritised ethnic backgrounds, often face compounded barriers. These experiences must be considered when designing inclusive policies and spaces.

<sup>9</sup> World Economic Forum (2023). Employers now see neurodiversity as a strength in the workplace. Here's why. <https://www.weforum.org/stories/2023/05/neurodiversity-employers-workers-jobs/>

<sup>10</sup> RSC (2024b). Neurodiversity in the chemical sciences. <https://www.rsc.org/policy-and-campaigning/science-culture/neurodiversity-in-the-chemical-sciences>

<sup>11</sup> RSC. Inclusion & Diversity Fund. <https://www.rsc.org/funding-and-support/funding/inclusion-and-diversity-fund>

<sup>12</sup> RSC. Chemists' Community Fund. <https://www.rsc.org/funding-and-support/chemists-community-fund>



## Current state of disability inclusion

Participants in the research indicate that progress has been made in recent years and decades towards improving disability inclusion. Continuing challenges include:

- reactive approaches to implementing adjustments
- lack of understanding and awareness
- delays in implementing adjustments
- perceived lack of commitment to disability-inclusive organisational culture

The COVID-19 pandemic brought widespread adoption of remote working practices. In some cases, these involved practices which disabled people had previously advocated for, such as facilitating remote access to lab data and enabling more flexible approaches to working hours.

## Who took part in this research

This research draws on:



Survey respondents represented a wide range of roles, sectors and backgrounds.

- **33%** of responses came from outside the UK, spanning 48 countries.
- **65%** of UK disabled respondents were women, who were also more likely to report having multiple types of disabilities or health conditions.
- **37%** of respondents had lived or personal experience of accessibility issues, identify as disabled, or experience barriers or limitations day to day.
- Participants included students, technicians, academics and industry professionals, across multiple career stages.

**415**  
completed  
responses

# Survey

**37%** of respondents have lived experience of accessibility issues, self-identify as disabled or experience barriers or limitations in day-to-day life.

**32%** respondents have responsibility for accessibility and inclusivity.

**51%** women **45%** men

**3%** prefer not to say **1%** non-binary

**65%** of respondents are resident in the UK

**33%** are resident in 48 other countries

**78%** of respondent are members of the Royal Society of Chemistry

## UK-residence survey respondents identify their conditions as:

**41%** neurodivergent/specific learning difficulty

**40%** mental health conditions

**33%** long-term health conditions

**70%** say their condition fluctuate or changes either somewhat or a great deal

## What sectors?

**59%** of responses are from academia

**23%** from business or industry

**7%** from other educational research industries

**5%** from government or public sector

**3%** not employed for profit or other

## What role?

**23%** professor (any level)

**15%** senior researcher/PI/lab head

**14%** staff scientist/technician/lab manager

**13%** student

**12%** industry professional

**7%** post-doc researcher

## What career stages?

**27%** established career **25%** mid-career **20%** early career

**16%** post-grad student **5%** undergraduate student

**Figure 1:** Survey demographics

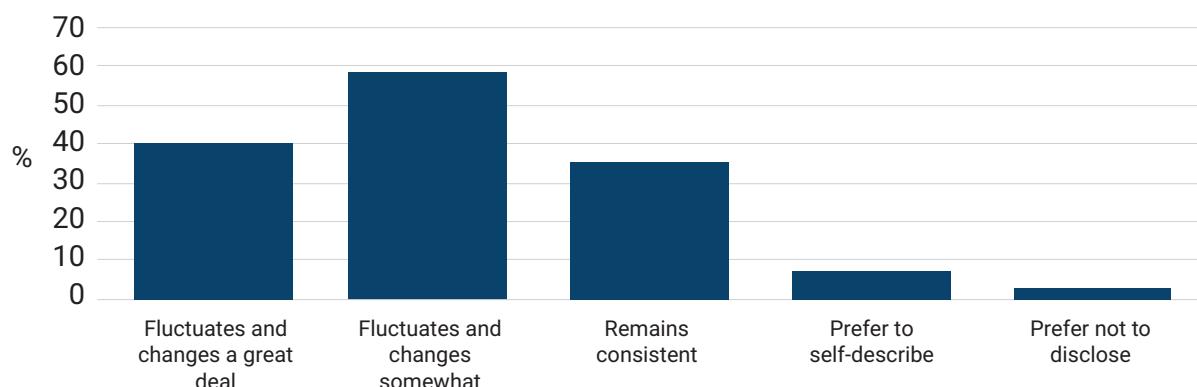
## Most common types of disability, long-term health condition or impairment among respondents by percentage of responses

(% of respondents specifying a type of disability)

- Mental health condition: 34% (47 respondents)
- Neurodivergent/specific learning difficulty: 31% (42 respondents)
- Long-term health condition: 28% (38 respondents)
- 40% of respondents who specified a type of disability indicated that they have more than one type of disability or condition.

## Impact of condition on daily life

69% of respondents indicated that the impact of their disability or condition on daily life fluctuates or changes (Figure 2).



**Figure 2:** How would you describe the nature of your disability in relation to its impact on your daily life (n=143).

## Workplace attitudes and belonging

Survey data shows:

- **73%** of disabled respondents feel a sense of belonging in the chemistry community, compared to **81%** of non-disabled respondents.
- Only **26%** of disabled respondents believe organisational values align with their lived experience.

Respondents shared concerns about stigma and inconsistent support within the chemical sciences. As one disabled early career woman explained:

*“Invisible disabilities are highly stigmatised and few people with them will feel comfortable coming forward when there is so little outward support.”*

**Early career, academia, disabled, UK**

Another respondent, a non-disabled mid-career woman, highlighted the uneven quality of provision:

*“We are way better at dealing with undergrad students than with staff...Staff processes are poor...Some managers are great, some have terrible attitudes that doesn’t encourage disclosure.”*

**Mid-career, academia, no known disability, UK**

Several respondents described the severe personal and professional impact of such experiences. A disabled postgraduate woman shared:

*"I was told I'd been blacklisted by the company after disclosing ADHD. So as a result, I won't ever be able to apply to work at the largest British pharmaceutical company."*

**Postgraduate student, disabled, UK**

Another mid-career disabled woman stated:

*"I had to take several months out of work unpaid, before eventually taking legal action and leaving the company. They drastically changed my career path, my capabilities and my overall mental health and disability management."*

**Mid-career, company with < 50 employees, disabled, UK**

Collectively, these responses underscore how stigma, inconsistent support, and discrimination contribute to exclusion and attrition across the profession.

- Disabled chemists report lower levels of belonging.
- Experiences of bullying and discrimination are both common and too often left unresolved, creating environments where exclusion persists.

Taken together, these patterns point to a clear and urgent need for proactive leadership and meaningful cultural change to ensure that the chemical sciences can become a profession where all individuals are able to thrive and fulfil their potential.

The findings in this report highlight the urgent need to improve accessibility and inclusion in chemistry laboratories. Although some progress has been achieved, systemic barriers continue to persist, limiting participation and creating avoidable inefficiencies. These challenges impact not only disabled individuals, who are most directly affected, but also the wider scientific community by restricting the diversity, innovation, and resilience of the field. The following chapter examines these barriers in detail and highlights opportunities to design laboratories that are inclusive and accessible by default.



## Bullying and discrimination

*"I have been forced out of two jobs due to disability discriminations experienced by myself and also witnessing others experience this with no consequences, for those involved. In fact I have witnessed those "bullies" being actively protected by management while accommodations were denied."*

Mid-career, company with < 50 employees, disabled, UK

Bullying and discrimination remain significant issues for disabled individuals in chemical sciences. Our survey reveals that amongst disabled respondents:

- **31%** have personally experienced bullying or discrimination due to disability
- **35%** have witnessed or been aware of such behaviour (compared to just **11%** of respondents without a disability)
- **26%** have reported disability bullying or harassment (as have **8%** of respondents without a disability)

These experiences range from microaggressions to sustained bullying, often resulting in career disruption. Disabled respondents who are non-binary, gender diverse, or trans may be disproportionately affected.

Only **52%** of disabled respondents believe their concerns would be acted on, compared to **70%** of non-disabled respondents.

# Chapter 2: The physical settings of chemistry laboratories

## Physical barriers in chemistry laboratories

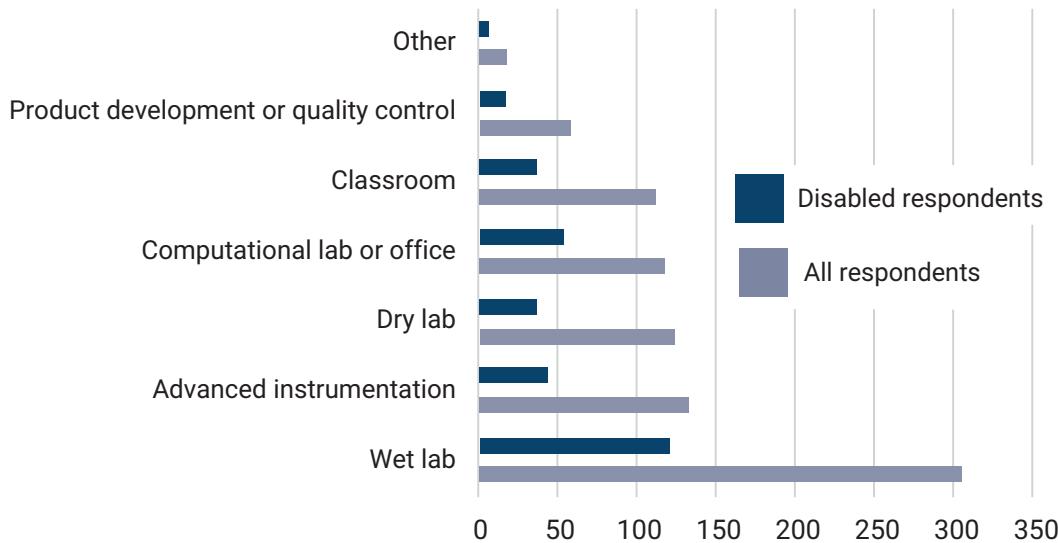
*“Labs are not designed for people that need walking or standing aids [...] I have been forced to hide my disability in order to continue doing my job and I have to take breaks when my body won't let me continue to stand. I have fallen repeatedly, which can be dangerous. Needing to carry chemicals up and down the stairs means I can't use walking aids as I need both hands for carrying.”*

Mid-career, company with > 250 employees, disabled, UK

This quote reflects a reality faced by many disabled chemists: **laboratory environments often exclude those with mobility, sensory or cognitive access needs.**

Despite the diversity of roles and research settings in chemistry, the physical environment remains a persistent barrier to full access for lab users.

Our research shows that while most survey respondents – disabled and non-disabled alike – work in wet labs, disabled respondents are more likely to work in computational labs or offices, suggesting a shift away from physically inaccessible spaces (Figure 3). This is not always by choice – it is often a necessity driven by exclusionary design.

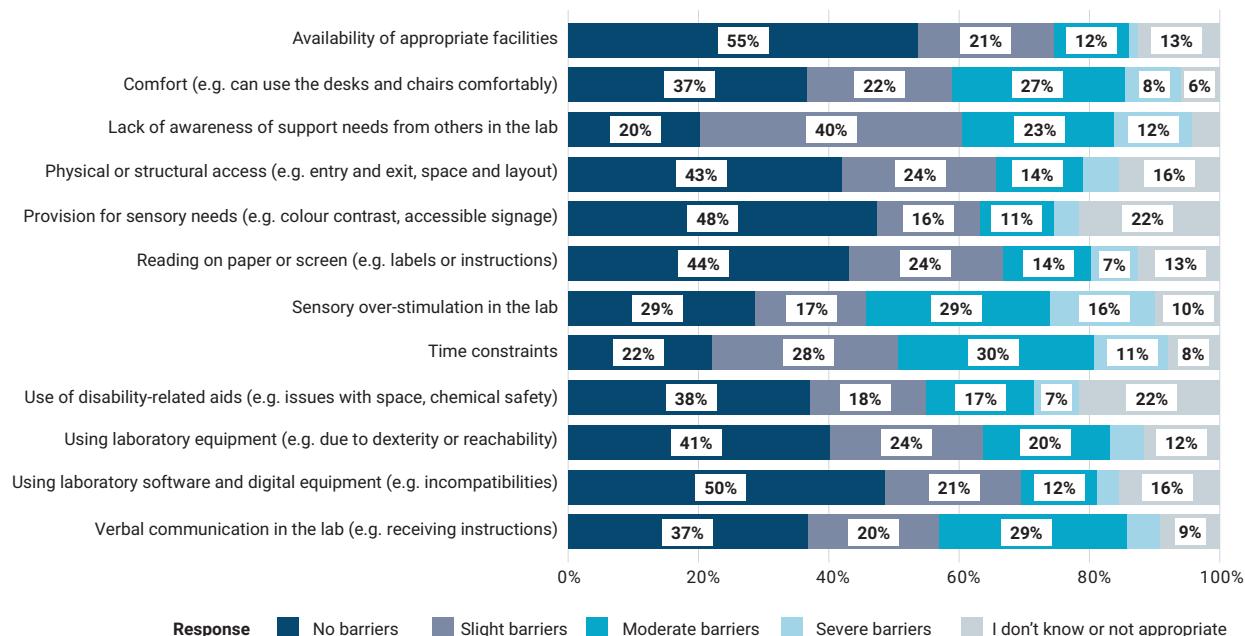


**Figure 3:** Which of the following describes your laboratory setting or learning environment (n=415, all respondents and n=154, disabled respondents).

When asked about challenges and barriers in laboratory settings (Figure 4), disabled respondents most frequently cited:

- Lack of awareness of support needs (75%)
- Time constraints (69%)
- Sensory over-stimulation (61%)

These findings are echoed in feedback gathered via interviews and survey comments.



**Figure 4:** To what extent do you experience barriers in the following aspects of laboratory use and experience? (n=154)

## Environmental factors

Barriers vary depending on the nature of a person's disability or health condition. For those with mobility impairments, the challenges are often structural. Survey respondents described:

- tight spaces which are difficult to navigate
- fixed-height benches and standing-only equipment that exclude those unable to stand for long periods
- multi-floor labs without lifts
- heavy doors with difficult handles

All of these factors make routine tasks difficult or unsafe, and wheelchair use is often discouraged due to safety concerns and inadequate infrastructure.

Neurodivergent and autistic chemists report challenges with verbal communication and sensory overload. The lab environment can be both overwhelming and disorienting, and light, noise and temperature control play a significant role in accessibility. Respondents described:

- constant, overwhelming noise from machinery and ventilation systems
- high background noise from fume hoods, pumps and sonicators, interfering with communication and concentration
- visual alarms and flashing lights intended for safety, which can cause sensory overload, especially for autistic individuals
- reliance on complex verbal instructions

*"The laboratories are also really challenging for neurodiversity... training is quite traditional... reams and reams of reading digital text which is not that accessible for a lot of people."*

Senior manager, company with >250 employees, interviewee, disability status unknown, UK

Chemists with mental health conditions often struggle with time pressure and lack of rest spaces. Blind or visually impaired individuals face difficulties accessing lab software, reading screens, and interpreting visual cues, all of which are essential to safe and effective lab work.

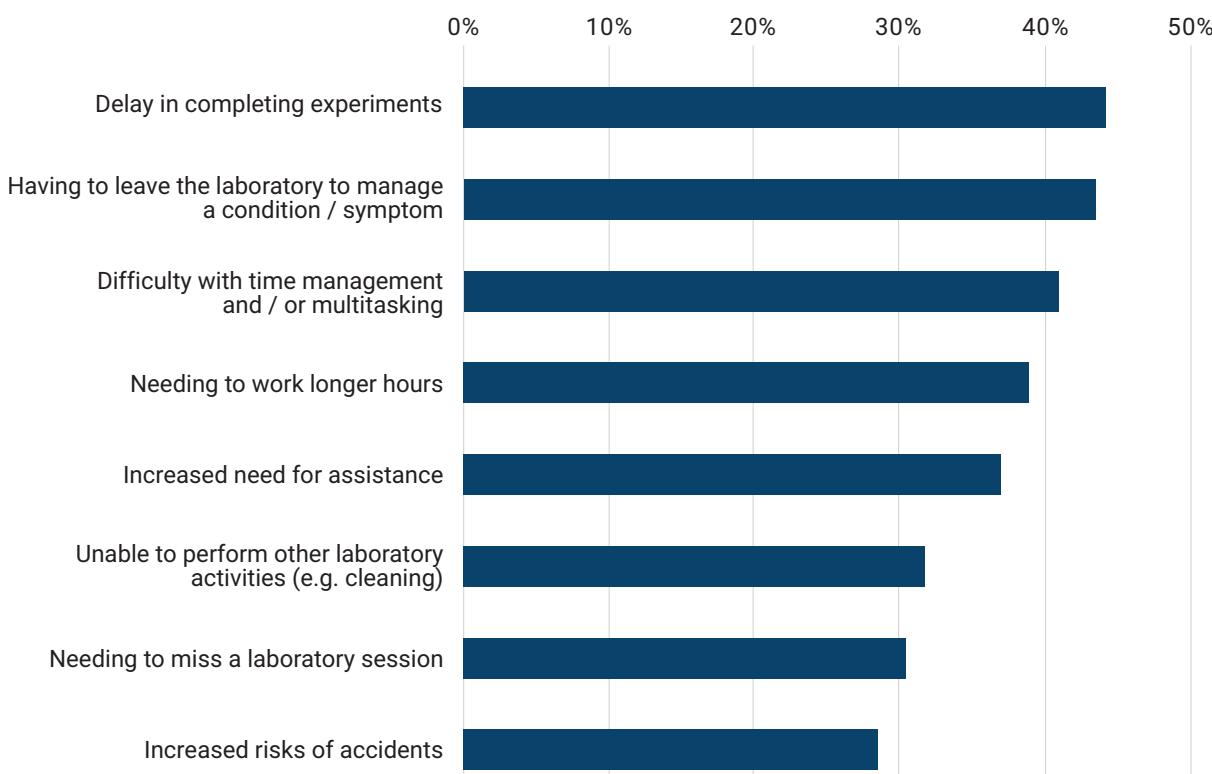
Even basic provisions like appropriately sized lab coats and chairs are often lacking, excluding larger-bodied individuals and people in wheelchairs. The absence of water fountains on lab floors forces energy-draining trips to other areas of the building, contributing to fatigue. Broken accessibility features, such as disabled toilets or entry buttons, send a clear message: disabled chemists are not being considered in the daily functioning of these spaces.

A recurring issue is the location of labs in older buildings. Even when the lab itself is accessible, the route to it may not be – heavy fire doors, indirect accessible entrances and outdated infrastructure can create additional barriers.

## Impact of barriers

The consequences of these barriers are significant (Figure 5). Over half of disabled respondents reported delays in completing experiments, needing to leave the lab to manage symptoms, working longer hours, and increased reliance on assistance. Autistic respondents are nearly twice as likely to miss lab sessions compared to neurodivergent peers.

These are not just inconveniences. They are systemic exclusions that shape career trajectories, limit opportunities and reinforce ableism in science.



**Figure 5:** Have you experienced any of the following impacts as a consequence of barriers in laboratories relating to disability? (n=154)

## Physical adjustments: what's present and what's missing

Results from the survey show that common physical adjustments include step free access, wide walkways, lever taps, and matte benches (Table 1). However, awareness of these features is uneven. For example, disabled respondents from the UK were less likely to know whether features like clear colour contrast were present in their labs.

All physical adjustments were seen as useful, with ergonomic chairs and wide walkways rated highly by both disabled and non-disabled respondents. Adjustable lighting was especially valued by disabled participants.

Some adjustments, though rarely present, were overwhelmingly seen as useful:

- Only 9% reported adjustable lighting being available, yet 81% said it would be useful
- Automatic doors were present in just 11% of labs, but 75% of respondents saw their value
- Enlarged text and symbols on labels, assistive software and formal support roles were all rated as useful, despite low availability

**Table 1:** Number of respondents who answered "Yes" to the question: "Please indicate which of the following features are present in your lab" and number of respondents answered "Yes" to the question: "Please indicate which of the following features are, or would be, useful in your lab". (n=154, disabled respondents only).

Lab feature	Availability		Usefulness	
	Response	%	Response	%
Step free	106	76	89	86
Matt bench surfaces instead of gloss	78	56	46	61
Wide walkways with turning space	72	51	99	88
Lever taps	58	42	75	83
Ergonomic chairs, stools and workspaces	50	36	104	91
Clear colour contrast (e.g. between floors, walls, benches, doorhandles)	39	28	60	71
Accessible electronic systems to assist with specific lab tasks (e.g. submitting samples, accessing data)	37	26	84	82
Height adjustable workspaces (e.g. fume hoods or benches)	32	23	95	85
Modified laboratory procedures	22	16	73	74
Alternative room arrangements or positioning	21	15	71	72
Enlarged text and symbols on labels	18	13	66	67
Additional formal support (e.g. lab assistant, sign language interpreter)	18	13	51	59
Automatic doors	15	11	83	75
Assistive software (e.g. text to speech, time management apps)	15	11	57	65
Adjustable lighting	13	9	91	81
Hearing loop (or other hearing technology solutions)	9	6	45	54
Assistive technology (e.g. Braille labels, screen readers, tablets)	7	5	45	56

Not all adjustments are universally welcomed. Some respondents noted that features like hearing loops, assistive technology and formal support roles were not always helpful, highlighting the need for personalised, context-sensitive solutions.

*"I am mostly physically able, my mental health is my personal issue. I can however see how some of the options above would make the laboratory more accessible to everyone."*

**Established career, industry professional, company with more than 250 employees, no known disability UK**

There are also cases where full accommodation may not be possible due to safety concerns. Handling hazardous materials, for example, may pose risks that cannot be mitigated for certain impairments.

*"Laboratories, by their nature, are barriers to certain disabilities [...] It is important that this is universally recognised, as the safety of all laboratory staff is paramount."*

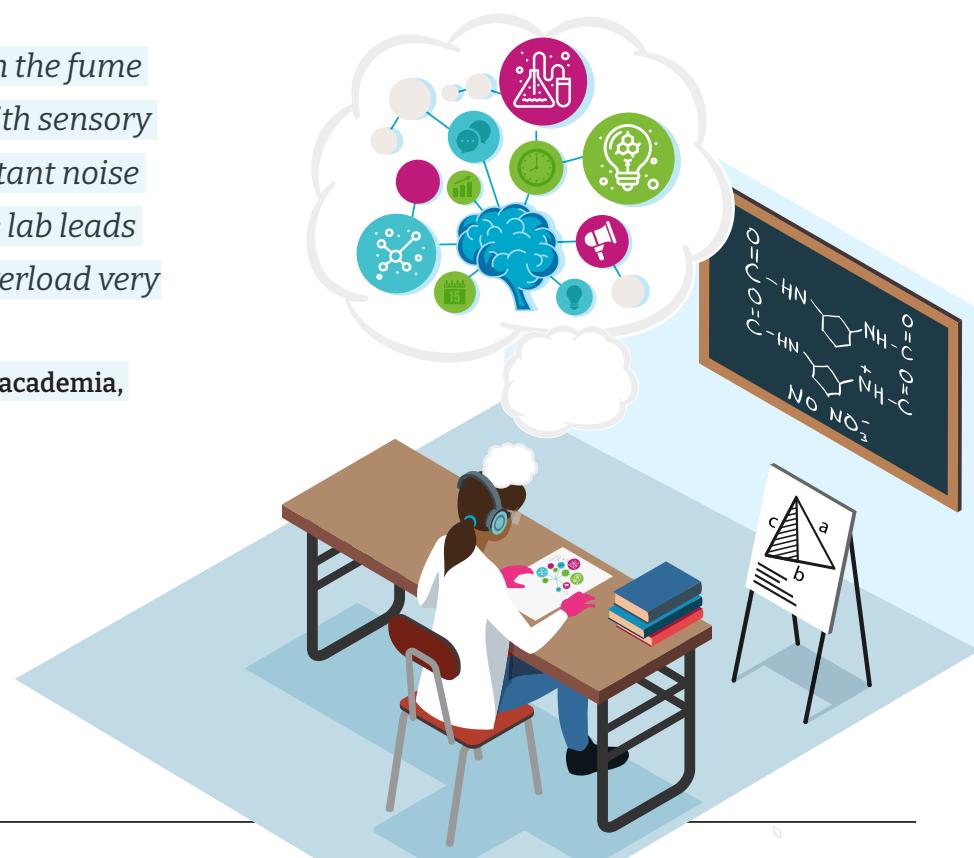
**Mid-career, industry professional, company with more than 250 employees, disabled, UK**

Our research shows that innovative strategies are beginning to support neurodivergent chemists more effectively. These include:

- breaking down written instructions into step-by-step guides
- providing video demonstrations
- offering noise cancelling headphones and dimmable lighting
- creating quiet rest spaces and flexible lab schedules

*"Dimmable lights in the fume hood would help with sensory issues [...] The constant noise of machinery in the lab leads to awful sensory overload very quickly."*

**Postgraduate student, academia, disabled, UK**



## Requesting and implementing adjustments

Our research found that implementation of adjustments in chemistry laboratories is often reactive, inconsistent and not embedded into standard practice. This is reflected in the findings that indicate the shift some disabled chemists have made toward computational or theoretical chemistry: fields that require less time in lab environments. While this shift demonstrates resilience, it also highlights a troubling reality. Accessibility should not mean exclusion from core scientific spaces.

While most respondents knew where to request adjustments, disabled participants were less likely to feel that their organisation actively sought feedback, offered proactive support or made the process straightforward. Many felt they had to advocate for themselves repeatedly.

*"I have specifically asked about automated doors and adjustable temperature and lighting but it was not followed up."*

Postgraduate student, academia, disabled, UK

### Survey insights: mixed experiences of accessibility adjustments

Among UK-resident disabled respondents:

- **58%** have witnessed or experienced effective implementation of adjustments
- **47%** have supported a colleague in requesting adjustments

However, negative experiences are more common:

- **62%** have witnessed or experienced significant delays
- **55%** have seen adjustments requested but not implemented
- **52%** have observed negative reactions to requests or implementations

*"Any adaptations that could be made were discussed openly with lab staff, but upper management were (at best) unhelpful [...] Some original features (like lever taps) should be standard, regardless of assessment of abilities."*

Established career, industry professional, consultancy, no known disability, UK

# Case study

## Health and safety, I&D and lessons in accommodating adjustments for future students

A Faculty Safety Manager worked in collaboration with a Disability Lead in the Department of Chemistry, laboratory coordinators, and other University departments to prepare for the arrival of a prospective student who used a wheelchair, for whom manual handling of equipment would not be feasible.

The collaboration was complex due to the number of departments involved (Disability Advisory Service, Fire Office, Chemistry Department, the student's Local Authority and building managers).

A variety of steps were taken, including measuring doorways to ensure suitability for a powered wheelchair, testing of alternative solutions to evacuation chairs, building works to adapt toilets and 'zoning' to ensure the student was as close as possible to their evacuation points. A significant adaption to synthetic laboratories was the use of a lab assistant wearing a head-mounted camera who carried out the practical in the lab following the student's verbal instructions. The camera allowed the student to observe the work via a line-of-sight video stream, allowing them to see the chemistry and the processes of lab work and give ownership of the work and agency in how it was carried out. As a result of the initiative, the student is progressing well in their undergraduate studies and able to achieve the desired learning outcomes in laboratories.

The successes in adjustments and collaborative working led to the creation of a case study which was shared across the University including with the Disability Action Group, Occupational Health, the Disability Advisory Service and Central Safety Department.

This prompted more strategic thinking around streamlining processes, such as stocking equipment including ear defenders for individuals with sensory issues or pagers for individuals with visual impairments to indicate when alarms are going off, and improving guidance regarding the preparation of PEEPs (Personal Emergency Evacuation Plans).

This work has also led to the creation of a small core working group of key role-holders ready to work together to ensure accessibility and inclusion when there are similar needs for cross-department collaboration.



*“I think the collaboration was a really valuable experience. It was really rewarding to see that the student can come in, unaware of the background work, and have the same experience as everybody else. The student is progressing in their studies and doing really well which is great.”*



# Chapter 3: Organisations, policies and external environment

**Despite growing awareness of the importance of accessibility, many disabled people working or studying in chemistry continue to encounter environments that are not designed with their needs in mind.**

While some organisations are making progress, efforts to improve accessibility often fall short. Our survey reveals that fewer than half of respondents have seen diversity and inclusion initiatives effectively supporting disabled staff in their workplace.

This gap between intention and impact directly affects disabled individuals' experiences in laboratories and learning environments.

*"I think most people are put off before they get to us, and so what can we do earlier on so that we're not ruling out a section of the population? But then just generally raising awareness and making sure people see that this has genuine benefits. There are just huge benefits of having a diverse group of people, for our customers, for science."*

Senior Manager, company with >250 employees, interviewee, disability status unknown, UK

To better understand workplace attitudes towards disabled people, we asked respondents:

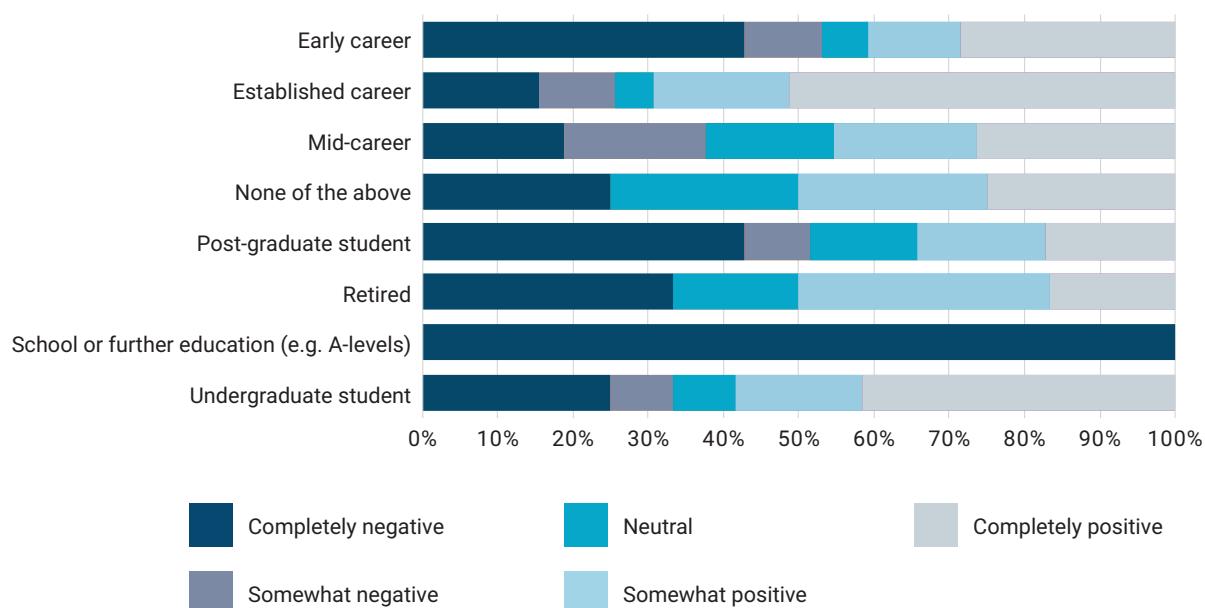
***“What three words would you use to describe the attitudes to disabled employees or students at your current workplace or place of study as a whole?”***

The responses, over 600 words in total, paint a complex and often troubling picture. While some commonly used words were positive, such as “supportive”, “inclusive” and “understanding”, the overall tone varied significantly depending on respondents lived experiences.

- **41%** of disabled respondents gave entirely negative word combinations.
- **43%** of postgraduate researchers and early career respondents did the same.

Even in roles dedicated to accessibility and inclusion, disabled people reported more negative experiences and perceptions than their non-disabled peers.

These findings suggest that while some organisations are making progress, many disabled people still experience exclusion, frustration and invisibility. The disconnect between policy and practice – between what is promised and what is lived – is a recurring theme throughout this chapter.



**Figure 6:** What 3 words would you use to describe the attitudes to disabled employees or students at your current workplace or place of study as a whole? (n=238)

**Table 2:** A selection of responses.

Sentiment	Selected word combinations
<b>Completely negative</b>	"difficult"; "burden"; "time consuming" "non-inclusive"; "apathy"; "unfair" "old-fashioned"; "misunderstood"; "scared" "ignored"; "unrecognised"; "neglected" "invisible"; "overlooked"; "dismissed"
<b>Somewhat negative</b>	"afterthought"; "unsupported"; "essential" "mixed"; "individual"; "hidden" "helpful"; "passive"; "negligent" "helpless"; "disappointed"; "determined" "sympathy"; "rudeness"; "carelessness"
<b>Neutral</b>	"well-intentioned"; "supportive"; "ineffective" "speaking"; "mobility"; "hearing" "positive"; "curiosity"; "uncomfortable" "neutral"; "surviving"; "official" "dated"; "hypothetical"; "sincere"
<b>Somewhat positive</b>	"kind"; "helpful"; "neutral" "fair"; "attentive"; "trying" "diverse"; "accepting"; "uncertain" "cordial"; "indifferent"; "friendly" "accepting"; "nurturing"; "restricted"
<b>Completely positive</b>	"unhindered"; "forward-thinking"; "advanced" "inclusive"; "supportive"; "understanding" "inclusivity"; "equality"; "no barriers" "accommodating"; "understanding"; "proactive" "compassionate"; "empathy"; "equality"

## Disclosure and adjustments

Policies provide the foundation for inclusive practice, but for many disabled people in the chemical sciences, the gap between policy and lived experience remains wide and persistent.

Survey data highlights this disconnect. Disabled respondents are:

- less likely to feel they can control their time in the lab.
- less confident that their workplace understands the challenges they face.
- less assured that their concerns about access will be taken seriously.
- less likely to believe that leaders clearly communicate expectations around disability-inclusive behaviours.

This gap between written commitments and day-to-day reality is reinforced by personal accounts, which illustrate the tangible consequences of policies that exist in principle but fail in practice:

*"I still think there's a question of how much are procedures and words in terms of information available, and the other is what actually happens on the ground."*

**Academic, university lab, interviewee, disability status unknown**

Another senior manager emphasised the need for leadership to take ownership of change:

*"There needs to be action and it needs to be positive action and it needs to be action that comes from us. We need to lead on that action, not be told how things are going to change, but to say what change needs to be required."*

**Senior manager, company with >250 employees, interviewee, disability status unknown**





Among the available adjustments, flexible working is widely available across the sector, with 80% of respondents reporting access. A higher proportion of UK resident respondents have this option available to them (**85%**) than is the case for non-UK residents (**73%**), however there is little difference in the level of use of flexible working between disabled and non-disabled respondents.

Requests for assistive features and technologies such as screen readers, alternative formats, quiet spaces, and medical rooms are often met with resistance or avoidance and inconsistently available.

Universal design elements, simple changes that benefit everyone, are widely supported and can make a significant difference but are rarely implemented as standard practice. As such many respondents have developed personal strategies to manage their conditions, such as adjusting work habits, breaking up tasks, or finding quiet times.

Among UK-based disabled respondents, 83% have shared their disability with their organisation. This is most often through one-to-one conversations with a manager, professor or teacher, or supervisor, though other channels such as occupational health, internal disability services, and HR are also used.

Despite this relatively high rate of disclosure, disabled respondents are far more likely to feel they must personally advocate to secure the adjustments they need: 70% agree or strongly agree with this statement, compared with 46% of their non-disabled peers. This disparity highlights the additional burden placed on disabled colleagues, who often carry the responsibility of negotiating access rather than receiving proactive support.

## Perceptions and awareness

*"If you're a minor minority, you don't count."*

Academic, university lab, interviewee, disability status unknown

Disability in chemical science is frequently invisible – not due to its absence, but because it is frequently overlooked or misunderstood. Survey data reveals a reactive culture where disabled individuals must continually advocate for their own inclusion:

- **62%** reported delays in adjustments
- **55%** saw requested adjustments go unimplemented
- **52%** faced negative reactions to their requests

These figures reflect a system that places the burden of inclusion individuals rather than institutions. The scarcity of visible disabled chemists perpetuates harmful myths and discourages disclosure.

Inclusion often depends on individual allies rather than structural support, underscoring the need for systemic change beyond simply promoting role models. Barriers to accessing help include:

- Poor visibility of services
- Confidential concerns
- Eligibility criteria rooted in medical language
- Lack of adequate training

## What needs to change

- Routine training
- Clear adjustment processes
- Dedicated funding
- Inclusive planning



## Organisational learning and change

Despite widespread public commitments to inclusion, many disabled individuals report a disconnect between organisational messaging and lived experience. Only 25% of disabled respondents agreed that their organisation's outward messaging matched their lived experience. This gap undermines trust and risks reducing inclusion to a branding exercise. Aspirational policies often lack implementation, and inclusive language is rarely backed by meaningful action.

While some organisations are making progress to close the gap between policy and practice, many disabled people in chemistry continue to face exclusion and barriers. Addressing these challenges requires not just well-written policies, but leadership, accountability, and a commitment to meaningful change.

Our research shows that individual advocacy can lead to broader change. In some cases, personal requests, such as those involving assistance dogs, have prompted universities to revise lab access policies at the safety committee level. These examples show that inclusive change is possible when organisations listen, learn and act.

Despite areas of progress, only one-third of survey respondents feel their organisation actively seeks feedback to improve accessibility. As one PhD student highlighted in a comment, there is a need for a stronger feedback loop between central administration and laboratory users, a simple yet vital mechanism to drive meaningful change.

# Case study

## Assistance dog

**An early career scientist working in an academic laboratory relies on an assistance dog to support their health and wellbeing.**

Assistance dogs are highly trained to perform specific tasks and provide alerts for disabled individuals or those with long-term health conditions. These include guide dogs for visually impaired people, medical alert dogs which anticipate health episodes, and autism assistance dogs which help manage anxiety and sensory challenges.

Having the dog present in the workplace makes a significant difference to the chemical scientist's daily experience.

Colleagues are generally supportive, enjoy the dog's presence and respect its boundaries. In this case, the dog does not enter the laboratory; instead, it stays in the upstairs office under the scientist's desk while they work in the lab. In case of an emergency, colleagues are prepared to assist by bringing the dog out of the office. However, there are also documented examples of procedures that allow dogs to enter laboratory environments, including protective measures such as specially designed lab coats and safety glasses for dogs.

Working in a postgraduate lab offers the scientist greater flexibility in managing their time, which also allows them to accommodate the dog's need for regular outdoor breaks.

Before the dog was introduced to the department, colleagues received a briefing, and a risk assessment was conducted to meet the requirements of the university estates service.

This was the first time the university had accommodated an assistance dog in the workplace. The scientist had to advocate strongly for the arrangement, and the process took 3 months. However, their efforts led to the creation of a new policy, making it easier for future requests to be considered and improved.



*“Everyone understood. I think the supervisor had a word with everyone before we came in, but everyone in the office is just very understanding, which I thought would have been another hurdle. But everyone took it in their stride, and everyone loves [the dog] and they respect his boundaries.”*



## Role of individual support and staff networks in organisational change

Support for disabled people in chemistry often begins not with policy, but with people. Whether through peer networks, grassroot initiatives activities or individual allies, many disabled scientists find their strongest support in informal spaces, especially when formal structures fall short.

Survey responses show overwhelming support for disabled staff networks: 83% agree or strongly agree that workplaces should have them. These networks are more than social spaces – they are engines for change.

Despite this progress, access to support remains uneven. While informal support from colleagues is widely appreciated, fewer than half of respondents report access to networks, mentoring or staff specifically tasked with supporting disabled people.

Support also varies by role and status. PhD students, international staff and those with non-visible disabilities face greater exclusion. Visa-dependent staff often cannot access disability certification without financial assistance, creating barriers to formal recognition and support.

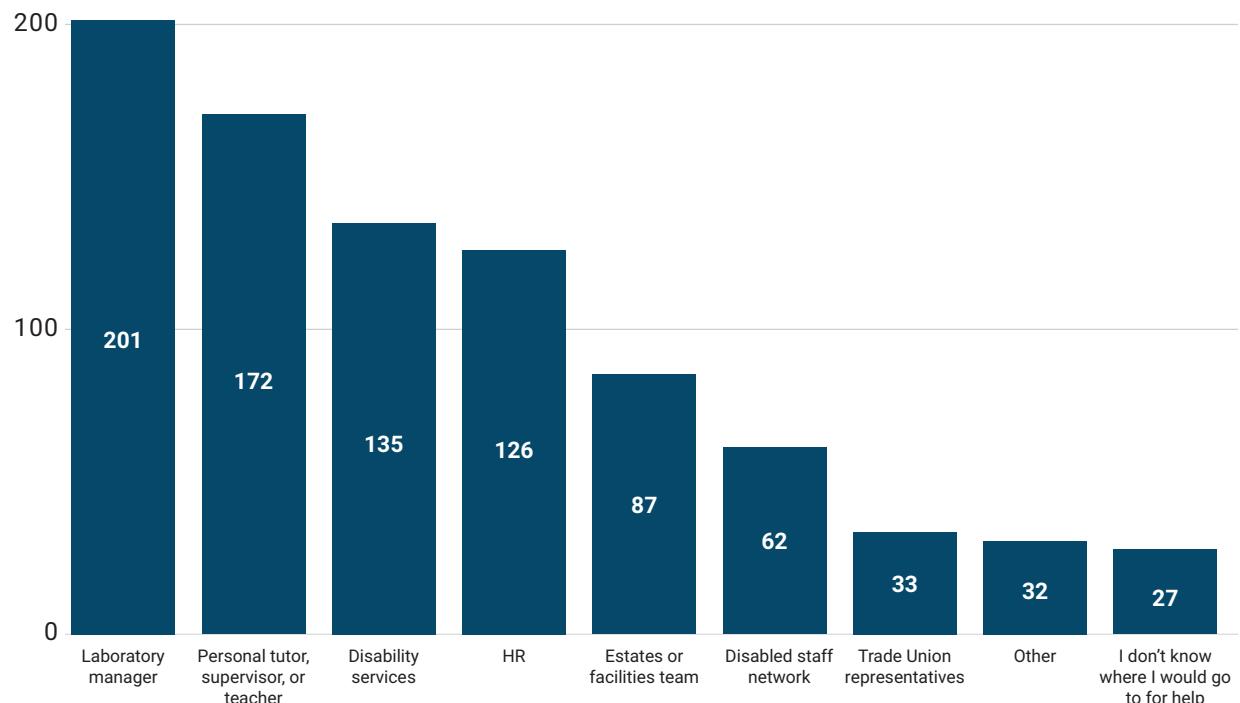
Cultural attitudes remain a significant barrier. Positive experiences are often person-dependent, linked to individual allies rather than systemic change. Suggestions for reasonable adjustments may be welcomed by peers but ignored by decision-makers.

Respondents highlighted what would help them and their colleagues act in allyship to improve inclusivity in labs. The message is clear: accessibility must be embedded from the outset, not bolted on later.

Respondents also shared ideas for how labs and institutions can foster allyship and embed accessibility from the outset, not as an afterthought. Key recommendations include:

- **mandatory training** on disability awareness and inclusive lab practices
- **inclusive onboarding** that invites needs-sharing without requiring formal declarations
- **clear communication and signage** throughout lab spaces
- **universal design and proactive adjustments** that benefit everyone
- **strong leadership, feedback loops and dedicated funding** to sustain change





**Figure 7:** Where would you go to get help for yourself or a colleague in relation to disability inclusivity in the lab?

When asked where would you go for help for yourself in relation to disability inclusivity in the lab, most respondents answered: laboratory manager followed by personal tutor or supervisor and disability services (Figure 7).

When asked about the support available in their organisations, most respondents noted the availability of informal support from colleagues (80%), support in identifying the adjustment needs (62%) and career mentoring (48%). The lowest percentage of respondent was reported against support available for access to general government disability benefits for costs associated with disability (20%) and to access government schemes that support access costs at work e.g. Access to Work (23%), disability advocacy groups or charities (24%).

## Role of funders and external organisations in organisational change

Creating accessible laboratories is not solely the responsibility of individual institutions. Funders, learned societies and external organisations have a powerful role to play, not only in setting expectations, but in shaping the infrastructure, culture and accountability mechanisms that make inclusion possible.

Interviewees and survey respondents called for greater leadership from these bodies. There is a clear opportunity for funders and societies to:

- bring together lived experience from disabled scientists
- share good practice across sectors
- influence the design of future laboratories and research environments

Some respondents suggested that funding eligibility could be tied to minimum accessibility standards, a move that could drive systematic change.

Still, challenges remain. Budget constraints are the most frequently cited barrier to improving accessibility, reported by 74% of survey respondents. Cost-cutting in lab design often sidelines accessibility, and even when occupational health recommends adjustments, funding is not always available.

There is also a perception – particularly in parts of the private sector – that accessibility is not a priority unless it is mandated or incentivised. This highlights the need for external pressure and public accountability. Funders and societies can help shift the narrative from seeing accessibility as a cost to recognising it as a core requirement for excellence in science.

# Chapter 4: Areas for increased action and recommendations

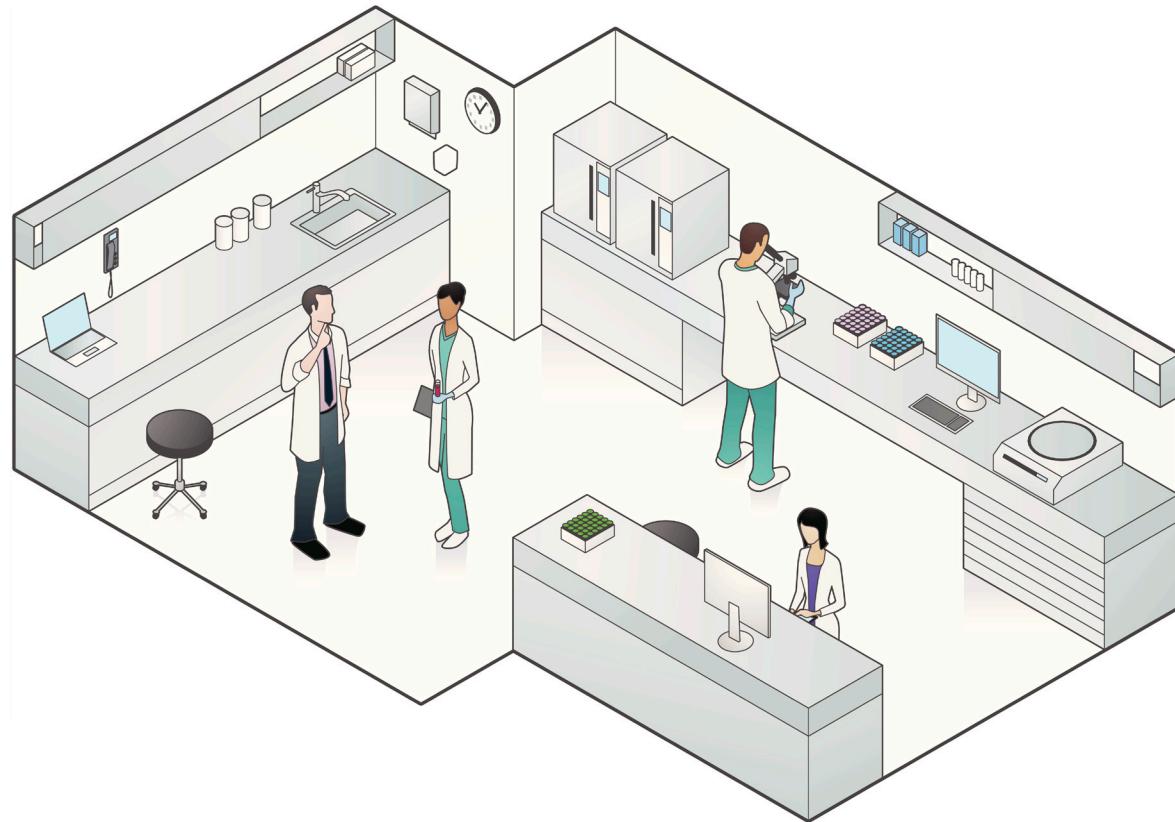
## Accessible lab design principles

**For many disabled scientists, the laboratory remains a space of exclusion. To make laboratories accessible to all, we need to create transformative change through inclusive design, emerging technology and cultural shifts.**

Technological advances such as automation, robotics and remote access offer a transformative vision for accessibility in the chemical science. Already in use to manage repetitive, hazardous or physically demanding tasks, these tools have the potential to do far more than improve efficiency. They can actively remove physical barriers and enable participation from scientists with diverse physical needs, including those who use wheelchairs or eye-gaze technology, to contribute fully to laboratory work.

*“We are seeing a big shift towards higher degrees of automation and remote access [...] It changes the accessibility dynamics in a positive way because it makes it much more accessible for everyone.”*

Senior leader, funder, interviewee, disability status unknown, UK



### Key themes from participant feedback include:

- Structural and architectural barriers
- Ergonomics and workspace design
- Adjustable infrastructure
- Universal design principles

*"Labs should be available to everybody no matter what... all of these things that make them humane first and foremost."*

**Academic, university lab, interviewee, disability status unknown, UK**

Inclusive laboratories are more efficient and adaptable. Universal design features, such as adjustable benches, quiet spaces and clear signage, support all users and reduce the need for individuals to self-advocate.

*"Height adjustable sections benefit everyone. It doesn't have to be the one token fume hood."*

**Early career, not for profit, disabled, UK**

*"A lot of these accessibility measures are useful not just to specific users but everyone."*

**Mid-career, company with > 250 employees, no known disability, UK**

# Case study

## Upgrading fume hoods, laboratory furniture and purchasing autosamplers for the NMR service to enhance accessibility

A university chemistry department has undertaken a proactive initiative to improve accessibility across its laboratory spaces. This includes the installation of height-adjustable fume hoods, benches and sinks in first-year undergraduate teaching laboratories and selected research labs.

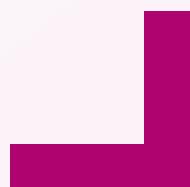
These changes were implemented over a three-year renovation period, reflecting a long-term commitment to inclusive design. The first-year chemistry labs accommodate approximately 250 students annually, making accessibility improvements particularly impactful. Updated safety protocols now require height-adjustable features for top-rated fume hoods to accommodate a wide range of chemical sciences and user needs. Plans are underway to extend these renovations to second- and third-year undergraduate laboratories.

In addition to infrastructure upgrades, the department secured central university funding to purchase automatic autosamplers for the Nuclear Magnetic Resonance (NMR) service. These autosamplers permit sample loading without the use of ladders, significantly reducing physical strain and safety risks. The initiative was originally prompted by the needs of a staff member with mobility challenges, but will benefit all users by improving overall accessibility and safety.

A detailed business case was required to justify the investment, given the need to integrate the autosamplers with existing high-specification instruments. Despite the cost, the benefits are substantial, including reduced risk of injury and expanded participation for individuals with both short-term and long-term mobility limitations.



*“We were keen to make our labs as accessible as possible for a wide range of students and staff including those with mobility difficulties. These changes will accommodate those with short term mobility limitations e.g. a sporting injury in addition to widening participation to those with more longer-term disabilities.”*



## Culture and consensus

Participants stressed the need for cultural change, including a shared understanding across universities, funders and learned societies of what accessibility means in practice.

For organisations, one of the main barriers to increasing inclusion is failure to implement policies or back commitments with meaningful action. To overcome this disconnect, organisations must:

- embed inclusion in everyday decisions
- listen to lived experience
- invest in implementation

Organisations must ensure that internal culture reflects external commitments. This includes avoiding tokenism, being transparent, sharing learning, and making inclusion visible and ongoing.

## Role of the Royal Society of Chemistry

As the professional body for the chemical sciences, the RSC has a unique responsibility and opportunity to act as an advocate and champion for disability inclusion. This means not only funding and supporting practical accessibility improvements, but also shaping the culture of the discipline by highlighting role models, amplifying lived experiences, and sharing examples of good practice across the sector.

The RSC can play multiple, complementary roles:

- **Advocate:** Influence policy and funding landscapes by ensuring that accessibility and inclusion are seen as core to excellence in research and education.
- **Champion:** Celebrate and amplify the contributions of disabled chemists, providing visible role models and building confidence for the next generation.
- **Supporter:** Provide resources for grassroots initiatives that promote inclusion and deliver tangible accessibility improvements.
- **Convenor:** Collaborate with funders, learned societies, universities, and industry to build sector-wide consensus on disability-inclusive practice.
- **Knowledge sharer:** Collect and disseminate examples of effective interventions, tools, and approaches so that good practice becomes common practice.

Through these roles, the RSC can help drive the systemic cultural change needed to make the chemical sciences a field where everyone can thrive.

# Principles for Disability-Inclusive Chemistry Laboratories

This summary outlines principles to foster inclusive, accessible laboratory environments across the chemistry sector.

1

## **Accessibility is built into every aspect of laboratory design**

- Universal design principles are integral to planning, equipment procurement, and renovation, ensuring spaces work for everyone from the outset.
- Accessibility is continuously reviewed and maintained through inclusive audits involving diverse lab users.
- Clear, reliable processes for workplace adjustments enable all users to participate fully and confidently.

2

## **Inclusive culture is part of everyday laboratory life**

- Accessibility and inclusion are shared values upheld by everyone in the lab community.
- Inclusive actions and behaviours are recognised and celebrated across individuals, teams and organisations.
- Leadership, strategy and performance frameworks embed accessibility as a marker of excellence.

3

## **Disabled people are empowered and influential within laboratories**

- Disabled lab users can express and review access needs openly at any stage of their involvement.
- Lived experiences from disabled people shape laboratory design, policy and practice through active participation and representation.
- The contribution of disabled people to inclusive culture and improvement is recognised and valued as core professional work.

## 4

### Allyship and shared responsibility strengthen inclusion

- All lab users are equipped with the awareness and skills to create accessible and respectful environments.
- Peer support and proactive allyship help ensure accessibility features are understood, used confidently, and continually improved.
- Accessible practices are normalised and visible, reducing stigma and promoting equity for everyone.

## 5

### Systems and policies sustain lasting accessibility and inclusion

- Policies, standards and funding frameworks consistently require and reinforce accessibility in laboratories and training.
- Investment in inclusive design and innovation drives ongoing improvements across the sector.
- Transparency through monitoring and reporting ensures accountability and builds trust in progress.

# Recommendations for key stakeholder groups

Based on the principles outlined, our recommendations are tailored to five key stakeholder groups:

**1**

## **Disabled lab users and their managers/supervisors**

- Require clear guidance on the process for adjustments and available support.
- Engage with staff networks and peer support for advocacy and community building.
- Participate in co-design and advisory roles to shape inclusive lab environments.

**2**

## **Non-Disabled lab users**

- Avoid assumptions; ask respectfully about colleagues' needs and defer to their expertise.
- Understand, support and lead in inclusive practices and normalise the use of accessible features.
- Participate in visible allyship and disability awareness training

**3**

## **Buildings and facilities managers and heads of departments**

- Conduct regular accessibility audits and maintain inclusive infrastructure.
- Embed accessibility into lab design, procurement, and safety planning.
- Clarify and publicise adjustment request processes.

**4**

## **Organisational culture leads**

- Promote accessibility as a strategic priority and shared responsibility.
- Encourage and reward inclusive behaviours and acknowledge emotional burden.
- Support staff networks and share learning across departments.

**5**

## **Policymakers and funders**

- Work in partnership to establish and enable minimum accessibility standards.
- Encourage and support upgrades, inclusive design innovations, and pilot programmes.

# Acknowledgements

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\*Affiliation at the time of publication.

# Appendix: the survey

## Your experiences with disability and laboratories

• Require institutions to report on accessibility, inclusion, and bullying metrics. The following questions ask about your experiences of laboratories and roles with responsibility for accessibility and disability inclusivity.

**1) With which of the following perspectives do you identify? Please add any comments in the box below if you would like to say more about this.\***

	Yes	No
I am a disabled chemist or otherwise have personal / lived experience of accessibility issues	<input type="checkbox"/>	<input type="checkbox"/>
I work or have worked in a role involving responsibility for accessibility and disability inclusivity	<input type="checkbox"/>	<input type="checkbox"/>
I have another position of responsibility not relating to disability inclusivity or accessibility	<input type="checkbox"/>	<input type="checkbox"/>
I currently work / study or have worked / studied in a chemical sciences laboratory	<input type="checkbox"/>	<input type="checkbox"/>

**Comments:**

The following two questions ask about disability and long-term conditions in different ways. Please answer each question separately and do not feel that your answer to one should determine your answer to the other.

**2) Do you self-identify as a disabled person?\***

- Yes
- No
- Prefer not to disclose

**3) Do you experience barriers or limitations in your day-to-day activities relating to any form of disability, long-term health condition or impairment (whether mental or physical)?\***

- Yes
- No
- Prefer not to disclose

**Page entry logic:** This page will show when: (#2 Question "Do you self-identify as a disabled person?" is one of the following answers ("Yes") OR #3 Question "Do you experience barriers or limitations in your day-to-day activities relating to any form of disability, long-term health condition or impairment (whether mental or physical)?" is one of the following answers ("Yes"))

## Further information about your experiences of disability or long-term health conditions

If you feel comfortable doing so, please could you answer the following questions about your disability, long-term health condition or impairment? This is to help us to develop a deeper understanding of your responses to other questions in this survey, by providing a bit more context about your experiences.

**4) If any, please indicate which best describes your disability, long-term health condition or impairment (whether mental or physical). (Please tick all that apply). If none apply to you, please select 'None of the above':**

- Autism
- Blind/visual impairment
- Deaf/hearing impairment
- Mental health condition
- Mobility impairment
- Long-term health condition (e.g. diabetes, cancer, chronic heart disease, epilepsy, HIV)
- Neurodivergent/specific learning difficulty (e.g. ADHD, dyslexia)
- Learning disability
- None of the above
- Prefer not to disclose
- Prefer to self-describe / Other: \_\_\_\_\_

**5) Is your disability generally visible to others you encounter in-person?**

- Yes
- No
- It depends
- Prefer not to disclose

**6) How would you describe the nature of your disability in relation to its impact on your daily life?**

- Remains consistent
- Fluctuates and changes somewhat
- Fluctuates and changes a great deal
- Prefer to self-describe: \_\_\_\_\_
- Prefer not to disclose

**7) Have you shared information about your disability with your organisation?**

- Yes
- No
- Other (please specify): \_\_\_\_\_
- Prefer not to disclose

**8) If you have shared information about your disability, how did you do this? Please tick all that apply.**

- Through HR
- As part of a recruitment process
- On an equalities monitoring form
- Other professional services in the organisation (e.g. Occupational Health, Health and Safety, internal disability service)
- External disability service
- One-on-one conversation (with employer, teacher or supervisor)
- Other (please specify): \_\_\_\_\_
- Prefer not to disclose
- I did not share this information

**Page entry logic:** This page will show when: ( Question "I am a disabled chemist or otherwise have personal / lived experience of accessibility issues" is one of the following answers ("Yes") AND Question "I currently work / study or have worked / studied in a chemical sciences laboratory" is one of the following answers ("Yes"))

## Challenges and barriers in the laboratory

These next questions ask about your experiences of barriers in laboratory use and the effects of these barriers.

**9) To what extent do you experience barriers in the following aspects of laboratory use and experience? If there are other barriers not listed here, please describe them in the comments box below.**

	Severe barriers	Moderate barriers	Slight barriers	No barriers	I don't know or not applicable
Physical or structural access (e.g. entry and exit, space and layout)	<input type="checkbox"/>				
Availability of appropriate facilities (e.g. toilets)	<input type="checkbox"/>				
Using laboratory equipment (e.g. due to dexterity or reachability)	<input type="checkbox"/>				
Using laboratory software and digital equipment (e.g. incompatibilities with assistive technology)	<input type="checkbox"/>				
Use of disability-related aids (e.g. issues with space, chemical safety, large magnets)	<input type="checkbox"/>				
Verbal communication in the lab (e.g. receiving instructions)	<input type="checkbox"/>				
Sensory over-stimulation in the lab	<input type="checkbox"/>				
Reading on paper or screen (e.g. labels or instructions)	<input type="checkbox"/>				
Time constraints	<input type="checkbox"/>				
Comfort (e.g. can you use the desks and chairs comfortably)	<input type="checkbox"/>				
Lack of awareness of support needs from others in the lab	<input type="checkbox"/>				
Provision for sensory needs (e.g. colour contrast, accessible signage, visual alarms)	<input type="checkbox"/>				

Comments:

**10) Have you experienced any of the following impacts as a consequence of barriers in laboratories relating to disability?**

	<b>Yes</b>	<b>No</b>	<b>I don't know</b>
Delay in completing experiments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unable to perform other laboratory activities (e.g. cleaning and organising)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Needing to miss a laboratory session	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increased need for assistance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increased risks of accidents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Having to leave the laboratory to manage a condition/symptom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Difficulty with time management and / or multitasking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Needing to work longer hours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**11) Is there anything else about the challenges and barriers in laboratories and their impacts that you would like to share?**

**Page entry logic:** This page will show when: Question "I currently work / study or have worked / studied in a chemical sciences laboratory" is one of the following answers ("Yes")

## Laboratory experience

In this section, we ask about your laboratory experiences to determine whether these have been positive or negative. Your responses will allow us to compare the experiences of disabled and non-disabled chemists.

### 12) How often does your current or most recent role require you to participate in laboratory sessions?

- Daily
- Weekly
- Monthly
- Varies depending on timetable
- Rarely
- Other: \_\_\_\_\_
- Never

### 13) On average, how long are the laboratory sessions you participate in? By this we mean the length of the 'session' in which you need to operate within the laboratory.

- Under 1 hour
- 1-2 hours
- 3-4 hours
- 4-5 hours
- 6-7 hours
- Over 7 hours
- Other (please specify): \_\_\_\_\_

## 14) How would you rate your experience in the following aspects of the laboratory:

	Positive experience	Slightly positive experience	Neutral	Slightly negative experience	Negative experience
Overall experience and lab use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Receiving resources, information and instructions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Receiving support from peers or colleagues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling comfortable and confident in the laboratory as a place to be	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operating equipment in the laboratory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**15) Think about the lab you currently work in or the last lab you worked in. Please indicate which of the following features are present and if they are useful:**

	Is this present in your lab?			Is this, or would this be, useful?		
	Yes	No	Not sure	Yes	No	I don't know
Step free access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Automatic doors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hearing loop (or other hearing technology solutions)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clear colour contrast (e.g. between floors, walls, benches, doorhandles)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Matt bench surfaces instead of gloss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lever taps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Height adjustable workspaces (e.g. fume hoods or benches)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ergonomic chairs, stools and workspaces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wide walkways with turning space	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adjustable lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enlarged text and symbols on labels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assistive technology (e.g. Braille labels, screen readers, tablets)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assistive software (e.g. text to speech, time management apps)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional formal support (e.g. lab assistant, sign language interpreter)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accessible electronic systems to assist with specific lab tasks (e.g. for submitting samples, or accessing data)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Modified laboratory procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative room arrangements or positioning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 16) Please add any additional comments which you would like to make about your experience of using these features or other access solutions already available in your lab.**

**Page entry logic:** This page will show when: Question "I currently work / study or have worked / studied in a chemical sciences laboratory" is one of the following answers ("Yes")

## Supporting and improving inclusivity and accessibility in the laboratory

This section is designed to help us understand support for disability inclusivity and accessibility in the laboratory.

Please answer based on your personal experience or the experiences of your peers and colleagues. Here, "workplace" refers to your current or most recent place of employment or study.

- 17) How far do you agree or disagree with the following statements relating to your current or most recent working environment and requesting adjustments?**

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know
I know how to request adjustments relating to accessibility for myself or others	<input type="checkbox"/>					
The process for requesting adjustments is easy	<input type="checkbox"/>					
People have to advocate for themselves to request adjustments	<input type="checkbox"/>					
The organisation actively seeks feedback to improve accessibility	<input type="checkbox"/>					
The organisation acts on feedback about ways to improve accessibility	<input type="checkbox"/>					
The organisation is proactive about signposting support and offering adjustments	<input type="checkbox"/>					

**18) Where would you go to get help for yourself or a colleague in relation to disability inclusivity in the lab? Please choose all that apply.**

- Personal tutor, supervisor, or teacher
- HR
- Laboratory manager
- Disability services
- Trade Union representatives
- Estates or facilities team
- Disabled staff network
- I don't know where I would go to for help
- Other: \_\_\_\_\_

**19) What support is available and is this helpful?**

	Is this support available?			Is this helpful (if the support is available), or would it be helpful (if the support is not available)?		
	Yes	No	Not sure	Yes	No	I don't know or not applicable
Support to identify the adjustments needed e.g. occupational health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Support from another member of staff tasked specifically to help with adjustments e.g. a technician or personal assistant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Informal support from colleagues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Disability advocacy groups or charities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Staff or student disability support networks (or similar)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Support to access governmental schemes that support access costs at work e.g. Access to Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Support to access general governmental disability benefits (for costs associated with disability)						
Career mentoring						

**20) Do you have any further comments about support which you are aware of or which you have received?**

**21) To what extent do you agree or disagree as to whether the following issues limiting the ability of your current or most recent laboratory to improve accessibility?**

	<b>Strongly agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly disagree</b>	<b>I don't know</b>
Budget constraints	<input type="checkbox"/>					
Lack of training or understanding of disability and accessibility in the lab	<input type="checkbox"/>					
Lack of knowledge of lab-specific solutions among disability services	<input type="checkbox"/>					
Resistance from staff, colleagues, or peers	<input type="checkbox"/>					
Technical difficulties with equipment	<input type="checkbox"/>					
Limited availability of equipment, staff, or resources	<input type="checkbox"/>					
Communication challenges between departments within the institution	<input type="checkbox"/>					
Lack of support from the institution	<input type="checkbox"/>					
Accessibility is already good – there is limited scope for improvement	<input type="checkbox"/>					

**22) Please add any additional comments which you would like to make about issues which limit the ability of your current or most recent laboratory to make improvements.**

**23) What support would help you and your colleagues to act in allyship to improve inclusivity in your laboratory?**

**24) Do you have any experience of setting up a Personal Emergency Evacuation Plan (PEEP), either for yourself or others? These are a legal requirement in the UK to ensure everyone can evacuate a building safely in an emergency.**

- Yes
- No
- I don't know

**Page entry logic:** This page will show when: #24 Question "Do you have any experience of setting up a Personal Emergency Evacuation Plan (PEEP), either for yourself or others? These are a legal requirement in the UK to ensure everyone can evacuate a building safely in an emergency." is one of the following answers ("Yes")

## Personal Emergency Evacuation Plans (PEEP)

This page asks about Personal Emergency Evacuation Plans (PEEP). These are a legal requirement in the United Kingdom, and are intended to ensure that all people can evacuate the building safely and promptly in the event of an emergency, regardless of any form of disability, health condition, impairment or difference. A PEEP may be permanent or temporary.

**25) Please answer the following questions about personal emergency evacuation plans.**

	Yes	No	Not applicable
Do you have a PEEP?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you think you need a PEEP?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you ever set up a PEEP for a colleague?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**26) How would you rate the ease of setting up a personal emergency evacuation plan?**

- Very easy
- Easy
- Neutral
- Somewhat challenging
- Challenging
- Not applicable

**27) Do you have any comments about personal emergency evacuation plans and their set up?**

## Organisational Culture and Inclusivity

In this section, we seek to understand the culture within your organisation and laboratory and how it impacts disabled chemists. If you do not have experience of working or studying in a lab, please respond based on your wider organisation.

**28) Is flexible working available to you? (Within our definition of flexible working we include – flexi-time, staggered hours, term-time hours, annualised hours, flexible shifts, compressed hours, homeworking.)**

- Yes
- No
- I don't know
- Prefer not to disclose

**29) Do you make use of any flexible working arrangements (see definitions above) currently?**

- Yes
- No
- Prefer not to disclose

**30) Within or relating to a laboratory setting, have you ever:**

	<b>Yes</b>	<b>No</b>	<b>I don't know</b>	<b>Not applicable</b>
Witnessed or been aware of bullying or discrimination of someone with a disability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Personally experienced bullying or discrimination because of your disability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reported disability bullying or harassment, either formally or informally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Been aware of a negative reaction to reports of bullying or discrimination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Been aware of a negative reaction from others to the request for, or implementation of, disability-related adjustments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Witnessed or experienced the effective application of disability-related adjustments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supported a colleague requesting disability-related adjustments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Witnessed diversity and inclusion initiatives successfully in action for disabled staff within my working environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Witnessed or experienced disability-related adjustments being requested but not implemented	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Witnessed or experienced significant delays in the implementation of disability-related adjustments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**31) Have any of these experiences impacted on your career or led to long-term changes to your future plans? (For example, taking time off, changing careers or courses, switching modules or disciplines)****32) Do you have any other comments about any of these experiences?****33) Have you experienced differences in disability inclusivity and accessibility in laboratories in different sectors (e.g. between labs in industry and in academia)? Please add any further description of these differences in the comments box.** Yes No Not sure

Comments:

**34) How far do you agree or disagree with the following statements relating to your current or most recent laboratory?**

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know or not applicable
I feel like I belong in the chemistry community	<input type="checkbox"/>					
There is an awareness and understanding of challenges faced by individuals with disabilities	<input type="checkbox"/>					
I feel that I have control of the amount of time that I spend in the lab and that this is manageable	<input type="checkbox"/>					
I think there is consistency between the organisation's values, policies and outward presentation regarding disability inclusion and my lived experience of it in the lab	<input type="checkbox"/>					
Workplaces should provide disability-specific mentoring	<input type="checkbox"/>					
Workplaces should have a disabled staff support network	<input type="checkbox"/>					
My laboratory is more accessible than other parts of my workplace or place of study	<input type="checkbox"/>					

**35) How far do you agree or disagree with the following statements relating to your current or most recent working environment?**

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know or not applicable
Leaders communicate clear expectations regarding disability-inclusive behaviours and culture for staff	<input type="checkbox"/>					
I am confident that I would be listened to if I raised a concern regarding disability access, and that action would be taken	<input type="checkbox"/>					
I would feel comfortable openly discussing biases and discrimination related to disability	<input type="checkbox"/>					
I would feel comfortable speaking out about instances of disability bullying and/or discrimination without negative personal consequences	<input type="checkbox"/>					
I feel that concerns relating to experiences of disability bullying and/or discrimination would be acted on appropriately	<input type="checkbox"/>					
I would recommend a colleague with a non-visible disability discloses this	<input type="checkbox"/>					

- 36) If you could make one change in your current laboratory to improve disability inclusivity, what would it be?
- 37) What three words would you use to describe the attitudes to disabled employees or students at your current workplace or place of study as a whole?

	<b>Write your chosen words here</b>
Word 1	
Word 2	
Word 3	

- 38) Please write any other comments you have regarding improving lab accessibility and inclusion for disabled chemists here.

## Role and Occupation

This page collects information about your career stage and role as a chemist. Your responses will help us understand the type of laboratory work you may perform.

### 39) Working patterns

Please indicate which best describes your current working pattern (Please select all that apply):

- Full time (studying)
- Part time (studying)
- Full time (working)
- Part time (working)
- Currently on parental leave
- Currently on long term health leave
- Currently on career break
- Retired
- Unemployed
- Prefer to self-describe / Other: \_\_\_\_\_
- Prefer not to disclose

### 40) What is your current role?

- Professor
- Associate professor (or equivalent)
- Assistant professor (or equivalent)
- Principal investigator / Laboratory head
- Senior researcher
- Post-doctoral researcher (or equivalent)
- Industry professional
- Staff scientist / Technician
- Currently unemployed
- Student
- Teacher
- Retired
- Laboratory manager
- Other (please specify): \_\_\_\_\_

**41) Sector**

Which of these best describes the sector you work in?

- Academia (including students)
- Company with > 250 employees
- Company with  $\leq$  250 employees
- Company with < 50 employees
- Consultancy
- Government
- Not for profit
- Public sector
- Research Institute
- Self employed
- Not currently employed
- Other (please specify): \_\_\_\_\_
- Education - Further education
- Education - other

**42) Which of the following describes your laboratory setting or learning environment? Please select all that apply.**

- Classroom
- Wet lab
- Dry lab
- Computational lab or office
- Advanced instrumentation
- Product development or quality control
- Other: \_\_\_\_\_

**43) Which of the following options best describes your career stage?**

- School or further education (e.g. A-levels)
- Undergraduate student
- Post-graduate student (working towards a Masters, PhD or other post-graduate qualification)

- Early career
- Mid-career
- Established career
- Retired
- None of the above: \_\_\_\_\_

**44) Are you a member of the Royal Society of Chemistry?**

- Yes
- No
- I don't know

## Diversity and Demographic Information

These questions cover a broad range of demographic information, helping us gain a more comprehensive understanding of your perspectives and responses to later questions. Your input will provide valuable insights into the intersectionality of disability and the challenges that come with it. You may choose to answer as many or as few questions as you like.

**45) What is your current country of residence - the place where you work, study, or operate a laboratory?**

[Country list drop-down]

**46) If you are in the UK, please specify which region or nation you are from.**

- Scotland
- Wales
- Northern Ireland
- North East
- North West
- Yorkshire and the Humber
- East Midlands
- West Midlands
- East of England
- South West
- London
- South East

#### **47) Gender identity**

With which gender do you most identify? Please select one option.

- Woman
- Man
- Non-binary or gender diverse
- Prefer not to disclose

#### **48) Are you trans?**

- Yes
- No
- Prefer not to disclose

#### **49) Age**

Please indicate which best describes your age group. Please select one option:

- 19 or under
- 20-24
- 25-29
- 30-44
- 45-59
- 60-74
- 75 and over
- Prefer not to disclose

#### **50) Race and ethnicity**

What are your ethnic origins? Please select ALL the geographic areas that apply to you:

- Western Europe
- Eastern Europe
- Central Europe
- North Africa

- Sub-Saharan Africa
- West Asia / Middle East
- South and Southeast Asia
- East and Central Asia
- Pacific / Oceania
- North America
- Central America and Caribbean
- South America
- Prefer not to disclose
- Prefer to self-describe / Other: \_\_\_\_\_

**51) How would you identify yourself in terms of race? Please select ALL the groups that apply to you:**

- Asian or Pacific Islander
- Black
- Gypsy or Traveller
- Hispanic or Latino/a/x
- Indigenous
- Middle Eastern or North African
- Roma
- White
- Prefer not to disclose
- Prefer to self-describe / Other: \_\_\_\_\_

**52) Nationality**

This question is about the country or nation to which you belong. Please indicate which best describes your nationality.

[Country list drop-down]

### 53) Sexual orientation

Please indicate from the list which best describes your sexual orientation (Please select all that apply) :

- Asexual
- Bisexual
- Gay
- Lesbian
- Heterosexual/Straight
- Pansexual
- Prefer to self-describe / Other: \_\_\_\_\_
- Prefer not to disclose

### 54) Caring responsibilities

Please indicate from the list which best describes your current caring responsibilities. By caring responsibilities, we refer to regular day to day responsibilities for an adult and/or child(ren):

- Primary or sole carer
- Joint carer
- None
- Prefer to self-describe: \_\_\_\_\_
- Prefer not to disclose

### 55) Caring responsibilities

Does the person you care for have a disability?

- Yes
- No

- Not applicable

### 56) Education

Please indicate your highest level of qualification:

- No qualification

- School level qualification

- Further education college qualification

- Undergraduate degree

- Postgraduate qualification

- Prefer to self-describe / Other: \_\_\_\_\_

- Prefer not to disclose

### 57) Religion

Please indicate from the list which best describes your religion or belief:

- Atheism

- Buddhist

- Christian

- Hindu

- Jewish

- Muslim

- Sikh

- No religion

- Prefer to self-describe / Other: \_\_\_\_\_

- Prefer not to disclose

### 58) Did you go through the UK school system?

- Yes

- No

**Page entry logic:** This page will show when: #58 Question "Did you go through the UK school system?" is one of the following answers ("Yes")

UK specific diversity and demographic questions

## UK specific diversity and demographic questions

### 59) Socio-economic variables

What type of school did you attend for the majority of your time between the ages of 11 - 16?

- Outside the UK: A state-run or state-funded school - Non-selective
- Outside the UK: A state-run or state-funded school - Selective on academic, faith or other ground
- Outside the UK: Independent or fee-paying school - where I received a means tested bursary covering 90% or more of the total cost of attending throughout my time there
- Outside the UK: Independent or fee-paying school
- Within the UK: A state-run or state-funded school - Non-selective
- Within the UK: A state-run or state-funded school - Selective on academic, faith or other ground
- Within the UK: Independent or fee-paying school - where I received a means tested bursary covering 90% or more of the total cost of attending throughout my time there
- Within the UK: Independent or fee-paying school
- I don't know
- Prefer not to disclose
- Prefer to self-describe / Other: \_\_\_\_\_

### 60) Socio-economic variables

When you were 18, had any of your parents or guardians completed a university degree course or equivalent (e.g. BA, BSc or higher)?

- Yes
- No
- I don't know
- Prefer not to disclose

### 61) Socio-economic variables

If you finished school after 1980, were you eligible for free school meals at any point during your school years?

- Yes
- No
- Not applicable (finished school before 1980 or went to school overseas)
- I don't know
- Prefer not to disclose

## 62) Socio-economic variables

Please tell us about the occupation of your main household earner when you were aged 14.

- Modern professional & traditional professional occupations such as: teacher, nurse, physiotherapist, social worker, musician, police officer (sergeant or above), software designer, accountant, solicitor, medical practitioner, scientist, civil / mechanical engineer.
- Senior, middle, or junior managers or administrators such as: finance manager, chief executive, large business owner, office manager, retail manager, bank manager, restaurant manager, warehouse manager.
- Clerical and intermediate occupations such as: secretary, personal assistant, call centre agent, clerical worker, nursery nurse.
- Technical and craft occupations such as: motor mechanic, plumber, printer, electrician, gardener, train driver.
- Routine, semi-routine manual and service occupations such as: postal worker, machine operative, security guard, caretaker, farm worker, catering assistant, sales assistant, HGV driver, cleaner, porter, packer, labourer, waiter/waitress, bar staff.
- Long-term unemployed (claimed Jobseeker's Allowance or earlier unemployment benefit for more than a year).
- Small business owners who employed less than 25 people such as: corner shop owners, small plumbing companies, retail shop owner, single restaurant or cafe owner, taxi owner, garage owner.
- Other such as: retired, this question does not apply to me, I don't know.
- Prefer not to disclose.

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