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## **Request for an official statement on ethnic and gender diversity in Chemistry and appropriate actions therefrom**

To whomever this may concern at the Universität Regensburg,

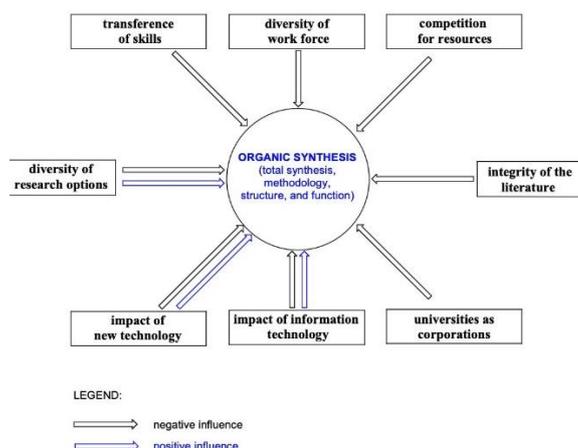
An article was recently published in *Angew. Chem. Int. Ed.* authored by Prof. T. Hudlický,<sup>1</sup> entitled: *“Organic synthesis-Where now?” is thirty years old. A reflection on the current state of affairs*

To quote excerpts from the article:

**Excerpt 1:** *“Diversity of work force. In the last two decades many groups and/or individuals have been designated with “preferential status”. Thus in spite of the fact that the percentage of women and minorities in academic and pharmaceutical industry has greatly increased. It follows that, in a social equilibrium, preferential treatment of one group leads to disadvantages for another. New ideologies have appeared and influenced hiring practices, promotion, funding, and recognition of certain groups. Each candidate should have an equal opportunity to secure a position, regardless of personal identification/categorization. The rise and emphasis on hiring practices that suggest or even mandate equality in terms of absolute numbers of people in specific subgroups is counter-productive if it results in discrimination against the most meritorious candidates. Such practice affects the format of interviews and has led to the emergence of mandatory “training workshops” on gender equity, inclusion, diversity, and discrimination [Note 2]”*

**Excerpt 2:** *“An example of focusing on “underrepresented minorities” can be seen in the recently established “Power Hour” at Gordon Research Conferences. While this effort is commendable in order to increase the participation of woman in science it diminishes the contributions by men (or any other group). Universities have established various centers for “Equity, Diversity and Inclusions”, complete with mandatory seminars and training. These issues have influenced hiring practices to the point where the candidate’s inclusion in one of the preferred social groups may override his or her qualifications”*

### Excerpt 3:



**Figure 1.** Factors that influence and contribute to further development of organic synthesis. (→ diversity of work force highlighted as a ‘negative influence’ on organic synthesis)

**Disclaimer:** Care is now taken to distinguish views held only by Dr. Joshua P. Barham. ‘I’ and ‘my’ refer to statements or opinions of Dr. Joshua P. Barham. No views are attributed to the research group of Dr. Joshua P. Barham, the Fakultät für Chemie und Pharmazie or its other members.

In my opinion: The anti-diversity, anti-women opinions posited in this article, bigoted, abhorrent and outdated. That the current hierarchy in the chemistry community is heavily dominated by white, male academics is not a result of selection of the ‘most meritorious candidates’. Frankly, it is instead the result of an academic culture deeply entrenched with misogyny and racism; that for decades has marginalized scientists with diverse gender, ethnic and cultural backgrounds. Such conclusions are presented without a shred of scientific basis. In fact, a body of evidence supports the opposite conclusion, that diversity in the work force is a formidable driver for creativity and innovation.<sup>2,3,4</sup> (the above statements are my opinions). Gender, ethnic and cultural diversity is a rather a strength in organic synthesis according to my own experience of research.

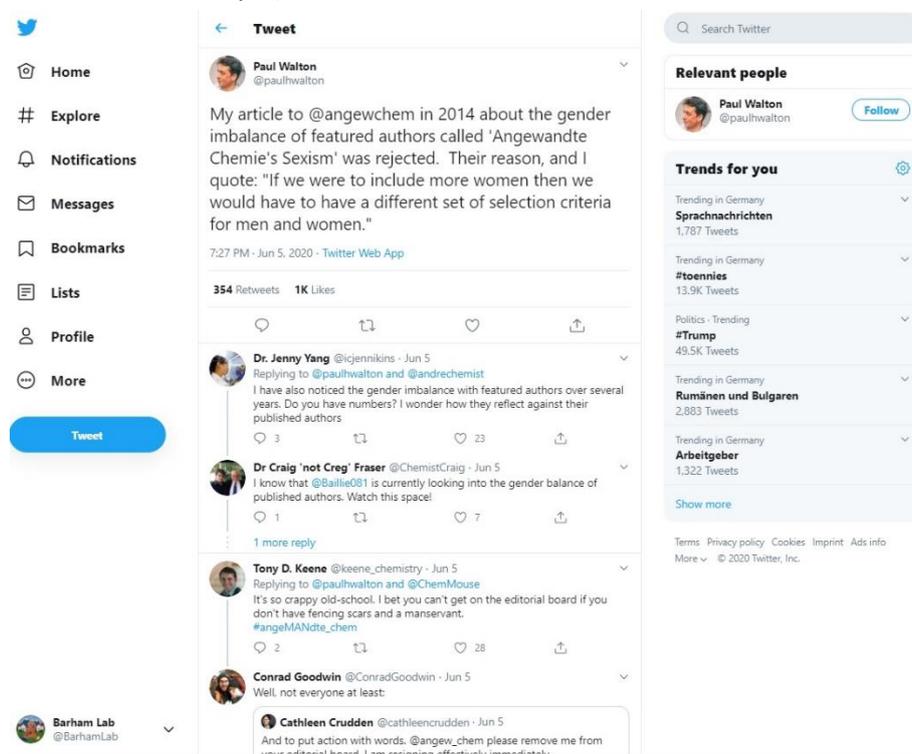
The *fact* is that this manuscript slid past multiple peer-reviewers and editors to appear in the public domain, in the German Chemical Society’s flagship premier journal. The response from *Angew. Chem. Int. Ed.* was to immediately retract the article:

*“This paper contains opinions that don’t reflect our values and has been removed. It wasn’t the final version and is pending further editing and final review. Something went very wrong here and we’re committed to do better. This isn’t who we are and action will be taken”.*<sup>5</sup>

Denouncing the essay, 16 members of the journal’s international advisory board, including Nobel Laureates, have resigned.<sup>6</sup> After *Angew. Chem. Int. Ed.*’s internal investigation, two referees and two senior editors have been suspended from the peer review process.<sup>7</sup> To my opinion, this signals that *four* chemists were (best case) i) incompetent enough to not flag such views, or (worse case) ii) endorsed these views. One would be optimistic indeed to assume that there are no remaining members of the editorial or advisory board left that are complicit in these views (Figure 2,3).



**Figure 2.** Tweet from 08.2016 from the official Angewandte Chemie Twitter (@angew\_chem). (→ Angew. Chem. endorses separate gender roles with boys becoming chemists, girls becoming technicians: “Those were the days”)<sup>8</sup>



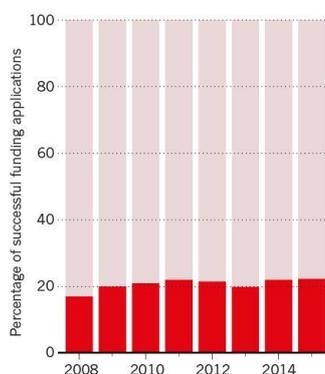
**Figure 3.** Tweet from 06.2020 from Prof. Paul Walton about a personal experience. (→ Angew. Chem. endorses a different selection criteria for men and women)<sup>9</sup>

Gender inequality in science has been a big issue in Germany over the last decade (Figure 4). Given that the percentage of successful female DFG applicants did not change from 2008-2015,<sup>10</sup> and given that Germany has one of the most male-dominated Prestige Indexes of global science leading countries as of 2008-2016,<sup>11</sup> it is *critical* to move towards a culture that no longer tolerates views such as those in the Hudlicky essay<sup>1</sup> and holds accountable those who offer such views a platform. For me, apathy is *no longer acceptable*. In my opinion, it is now the right time to use this event as a catalyst for change, and for German institutions like ours to demonstrate leadership. I note that *Journal of the American Chemical Society* has already taken the initiative to publish a rebuttal to such views.<sup>12</sup>

#### GENDER AND FUNDING

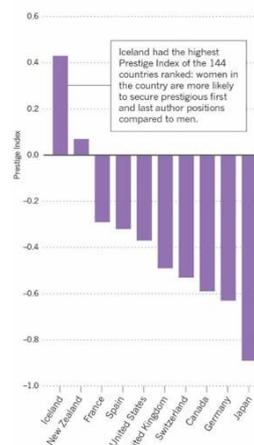
Far fewer women than men apply to the German Research Foundation (DFG) for funding, which is reflected in the low number of overall successful applications. Little has changed in the last decade.

Male Female



#### EXCLUSIVE AUTHORSHIP

Women in Japan are significantly under-represented in prestigious authorship positions in articles published between 2008 and 2016 in 54 of the 68 journals listed on the Nature Index.



**Figure 4.** Left: Percentage of successful funding applications to the DFG from 2008-2015 distributed by gender of applicants. Right: Prestige Index (first and corresponding author positions) by gender of applicants in various countries from 2008-2016. Zero represents gender equality in Prestige Index.

In recent years, UR's Fakultät für Chemie und Pharmazie has made commendable efforts towards gender equality. As of SS 2019, 56% of enrolled students are female (degree programs BSc, MSc chemistry, chemistry school teachers, Staatsexamen Pharmazie). In SS18 and WS18/19, 41% of all doctorates completed were by female doctoral students. The SynCat Elite Master Degree Program in Chemistry emphasizes the importance of international diversity on its homepage.<sup>13</sup> I joined UR not only as an institution that is an ideal platform for my research programme and local collaborations, but an institution which I feel shares progressive views of gender, ethnic and cultural diversity and inclusion. I reach out to you now to request **two** actions:

- (1)** Given UR's policies on equal opportunities, antidiscrimination and internationalization,<sup>14</sup> I urge you to publish an official statement from UR, preferably from the Fakultät für Chemie und Pharmazie that:
- i) admits the *fact* the essay was published in *Angewandte Chemie* (without opinion or judgement).
  - ii) states that the views expressed within the Hudlicky essay are not aligned with UR's views
  - iii) embraces the importance of gender, ethnic and cultural diversity in chemistry.

Regardless of the content of any statement, I respect the disciplinary processes and ongoing efforts at *Angew. Chem. Int. Ed.* in addressing this issue, therefore I do not deem it productive, or appropriate, to criticize the journal's handling/response of the situation.

- I support a statement containing all parts (i), (ii) and (iii). For appropriate examples, see Ref.<sup>16,17</sup>
- Other colleagues at UR<sup>15</sup> would support a statement containing only part (iii). For an appropriate example, see Ref.<sup>18</sup>

In this situation, I feel that it is entirely appropriate to *only* condemn the views within the essay itself, which *does* mean admitting the fact the essay was published by *Angew. Chem. Int. Ed.* For me, publicity of the specific incidents of discrimination are key to raising awareness, as a first step in a positive direction that is followed up by meaningful actions. For me, (too) general statements gloss over this direct assault on diversity in organic synthesis, sweep the incident under the carpet, redirect attention to recent broader global political movements ([#BlackLivesMatter](#)) and risk normalizing the culture. To my mind, a statement containing (iii) alone just doesn't go far enough to stand up for individuals afflicted by such discriminatory views in this Faculty.

In recent months, we have learnt how the best response to the global *virus* of Covid it to target its *platform* (social distancing) to spread. Even better would be to target the *source* with a vaccine. Perhaps the targeted acknowledgement of the *source* of discriminatory views and the *platforms* that allow them to spread is also the best response to purge the global virus of sexism/racism.

**(2)** To my mind, (too) general statements have been made for years towards equality in research, but are redundant without meaningful action.<sup>19</sup> They clearly have not, and will not, stop incidents and circumstances described in this letter reoccurring. The aforementioned culture is completely exposed in the Coronavirus 2020 pandemic we now face, where female researchers (typical 'primary carers') with children are disproportionately affected.<sup>20</sup> Therefore, I request you to take the following actions:

- i)** Teaching demands for 2020 be relaxed on researchers who are 'primary carers'. A correction factor be applied to the system determining criteria/credits related to teaching activities which affect career progression in order to ensure a level-playing field for researchers who are 'primary carers'.
- ii)** Additional local budget be directed to initiatives to support researchers who are 'primary carers' whose research progress will have suffered as a result of childcare burdens during school closures, where home office would not have been an effective method of research itself or for research group leadership over the past several months.
- iii)** Additional local budget be directed to support international researchers facing financial difficulty and steps be taken to help identify (or extend existing) suitable accommodation arrangements.

I would take the opportunity to thank you in your handling of an official statement from UR / from the Fakultät für Chemie und Pharmazie, and for taking appropriate actions to support female and international researchers who have suffered disproportionately in the Coronavirus 2020 pandemic.

Yours Sincerely,

Joshua Philip Barham Ph.D (represented by "I", "my")

## References:

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- 2) <https://www.scientificamerican.com/article/how-diversity-makes-us-smarter/>
- 3) [https://hbr.org/2017/03/teams-solve-problems-faster-when-theyre-more-cognitively-diverse?referral=03758&cm\\_vc=rr\\_item\\_page.top\\_right](https://hbr.org/2017/03/teams-solve-problems-faster-when-theyre-more-cognitively-diverse?referral=03758&cm_vc=rr_item_page.top_right)
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- 15) Private e-mail or personal communications to Dr. Joshua P. Barham
- 16) <http://chemlabs.princeton.edu/biolec/2020/06/11/biolecs-statement-regarding-a-recent-angew-chem-paper/>
- 17) <https://brocku.ca/wp-content/uploads/sites/61/Provost-G-Finn-Letter-to-the-Community-June-7-2020.pdf>
- 18) <https://www.rsc.org/news-events/articles/2020/jun/id-joint-societies-statement/>
- 19) H. Antecol, B. Kelly, S. Jenna *American Economic Review* **2018**, 108, 2420-2441. DOI: 10.1257/aer.20160613
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