Not just a box to be ticked

Philip Moriarty
School of Physics & Astronomy
University of Nottingham



"Sloppy science is a larger evil than research misconduct"

Lex Bouter, WCRI-2015

"...large underestimation of the importance of fear"

Brian Martinson, WCRI-2015



Fraudulent vs faulty



teachers need to be careful

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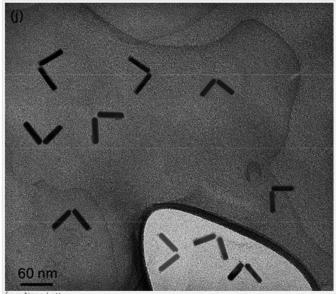
« Dorta Paper Link Roundup

How Should the Online Community Handle Suspicious Papers? »

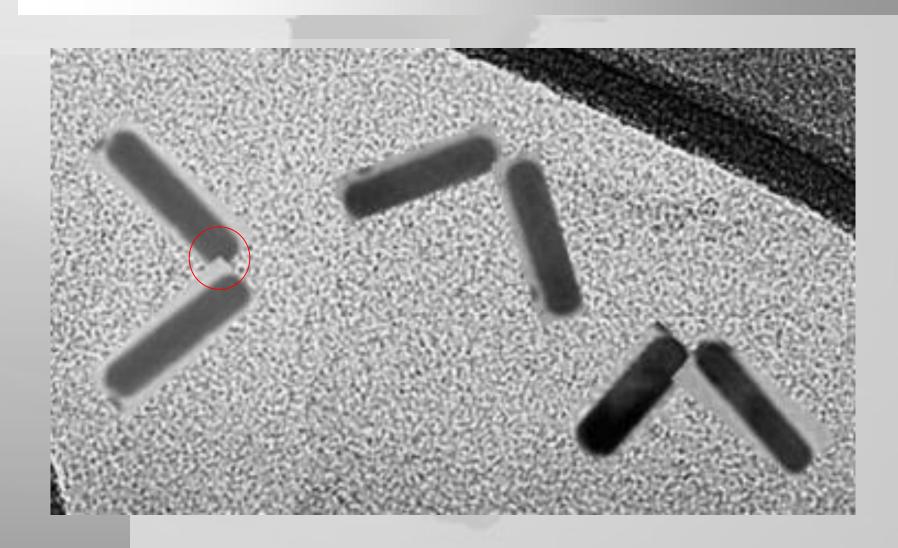
Some VERY Suspicious TEM Images in Nano Letters August 140, 2013

Mitch at Chemistry-Blog has a new <u>post</u> about a set of very suspicious TEM images that was <u>published</u> recently in the journal *Nano Letters*.

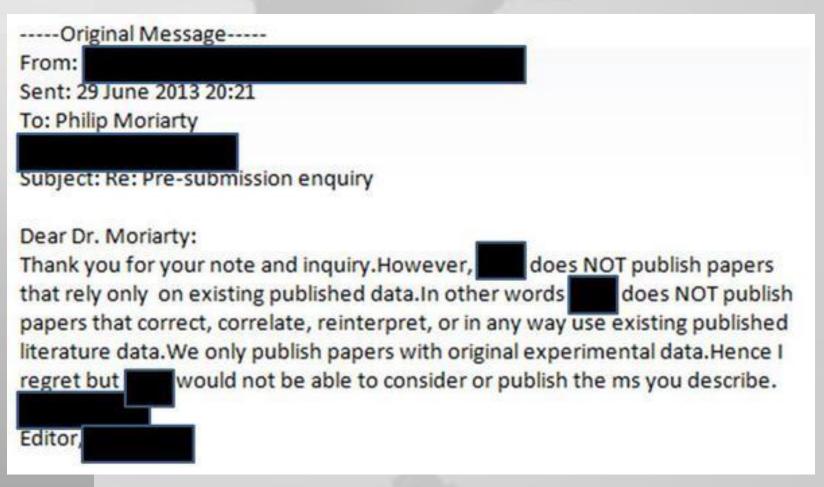
The associated <u>paper</u> reports the fabrication of pairs of gold nanorods in "chopstick" structures where the two rods touch at their tips and form an angle that the authors say they can tune. Some of the TEM data can be viewed for free in the associated SI <u>file</u>. If you zoom in on the images, it appears that the background immediately around many of the rods is different from the rest of the background field. Hmmm...



from Nano Lett.



Traditional publishers *very* often not interested in correcting scientific record...



PubPeer and the role of PPPR



Faulty rather than fraudulent

News Science Peer review and scientific publishing

Nobel winner declares boycott of top science journals

Randy Schekman says his lab will no longer send papers to Nature, Cell and Science as they distort scientific process

Ian Sample, science correspondent
The Guardian, Monday 9 December 2013 19.42 GMT



Randy Schekman, centre, at a Nobel prize ceremony in Stockholm. Photograph: Rob Schoenbaum/Zuma Press/Corbis

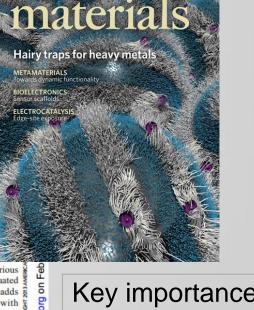
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tics that the stripes ok like an imaging lers say the jury is eports. The bottom ying to take images ee molecules wide pushes the current bey are trying to do

v.sciencemag.org



Key importance of 'iconography' and imagery in modern scientific 'story-telling'

Headline trumps rigour.

We pay for the brand





"Sloppy science is a larger evil than research misconduct"

Lex Bouter, WCRI-2015

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Brian Martinson, WCRI-2015



Doing the right thing

Retraction Watch

Tracking retractions as a window into the scientific process

Announcing the DiRT Award, a new "doing the right thing" prize — and its first recipient

with 2 comments

It takes a lot of work to clean up the scientific literature, and some researchers and organizations deserve special recognition. That's why we've established a "doing the right thing" category when we see praise-worthy progress in individual retractions, and have now gone a step further: We've created the <u>DiRT Award</u>, a new annual prize to recognize particularly note-worthy behavior.



As our co-founders <u>announce today in STAT</u>, the first recipient of the DiRT Award is the American Diabetes Association (ADA). Regular readers may suspect why — <u>here' a hint</u> — but to learn more about the award, and why it's going to the ADA, check out our co-founders' <u>STAT</u> column out today.

Have a nomination? Click here.

Like Retraction Watch? Consider making a <u>tax-deductible contribution to support our growth</u>. You can also follow us <u>on Twitter</u>, like us <u>on Facebook</u>, add us to your <u>RSS reader</u>, sign up on our <u>homepage</u> for an email every time there's a new post, or subscribe to our <u>daily digest</u>. Click <u>here to review our Comments Policy</u>. For a sneak peek at what we're working on, <u>click here</u>.

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NATURE | EDITORIAL





Integrity starts with the health of research groups

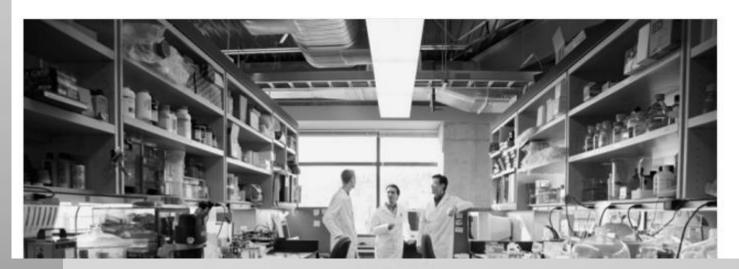
Funders should force universities to support laboratories' research health.

03 May 2017





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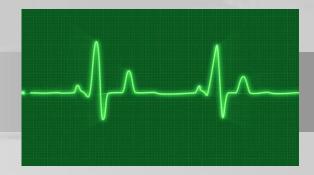


Health of research groups

- "Technical robustness of lab practices
- Assurance of ethical integrity
- Psychological health and well-being of group members."



Health of research groups



For example, how, if at all, are group members' data scrutinized by other members or the PI, perhaps by spot-checking? To what extent does a PI ensure that a graduate student or postdoc with a strong research claim is not deceiving themselves? In 2008, a study of case files concerning trainees found guilty of misconduct concluded that nearly three-quarters of the trainees' mentors had not directly reviewed source data (D. E. Wright et al. Sci. Eng. Ethics 14, 323–336; 2008). What bandwidth does the PI have for such oversight?

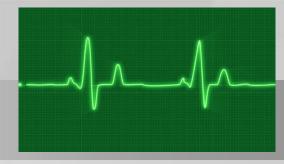
NATURE | EDITORIAL



Integrity starts with the health of research groups

Funders should force universities to support laboratories' research health.

03 May 2017



Health of research groups

Then there is a PI's approach to other essential aspects of research. For example, do group members get experience of peer review and grant applications? Is such training neglected, or are trainees so burdened with it that their own research is compromised?

And in relation to psychological well-being, to what extent do group members perceive themselves to be treated fairly, in good times or bad? At least three organizations — Future of Research, Rescuing Biomedical Research and the Global Young Academy — have sprung up in the past decade to advocate for early-career researchers, suggesting that trainees do not feel they are receiving just treatment. In 2013, an anonymous survey at one institution found that almost one-third of trainees felt pressure to back a mentor's research hypothesis even

---- mot career enouge.

In 2013 the Institute of Physics (IOP) published data on the numbers of academic physics staff at UK higher education institutions (http://ow.ly/ Lr3N2). In the academic year 2011/12 there were 745 professors, 1350 lecturers and senior lecturers and 2110 postdoctoral researchers in UK physics departments. About 40% of all permanent academic appointments at UK physics departments go to overseas candidates. Assuming a steady-state population of permanent academic staff and postdocs, and that academic appointments are held by people aged between 30 and 65, on average 36 appointments will be made annually to postdocs in the UK, or 1.7% of the postdoc population. If we exclude appointments to professorships, the successful fraction is 1.1%.

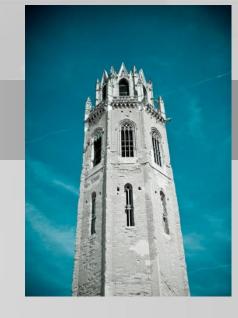
These numbers should be pinned up on prominent notice-boards in every physics department across the country. While it was clear from your artists of

Most university physics departments are living in denial or hiding the truth from their students

Adrian Sutton

Imperial College London, UK a.sutton@imperial.ac.uk

Physics World May 2015



Further up the chain...



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Few Americans have confidence in universities, survey finds

Research finds that support levels are lower among conservatives and some minority groups

May 1, 2017







By Ellie Bothwell

Twitter: @elliebothwell

Just 14 per cent of Americans have "a great deal of confidence" in universities, according to research.

A paper analysing a survey of more than 10,000 US citizens found that a higher proportion (19 per cent) reported a great deal of confidence in the scientific community specifically.

Woman who linked racism with Scottish nationalism quits Twitter over safety fears

Claire Heuchan, a black Scottish PhD student who wrote article supporting Sadiq Khan, believes critics were trying to discover where she lived



Claire Heuchan wrote a piece supporting claims at the weekend by Sadiq Khan that there were parallels between Scottish nationalism and racist movements elsewhere in the world. Photograph: Mark Runnacles/PA

A black feminist researcher who was abused for criticising Scottish nationalism has deleted her Twitter account because she feared for her physical safety.

Claire Heuchan, a Scottish PhD student at Stirling university, said she believed her often abusive opponents were trying to discover where she lived by searching and sharing tweets from her account.

US universities

Professor Watchlist website elicits both fear and ridicule in US universities

Website recently established by conservative thinktank targets professors who they say spread 'leftwing propaganda' at US universities











Mazin Sidahmed

Friday 2 December 2016 17.28 GMT



'I'm laughing at them while at the same time shaking my head and worrying,' said one professor who had been added to the list. Photograph: Tom Merton/Getty Images/Caiaimage

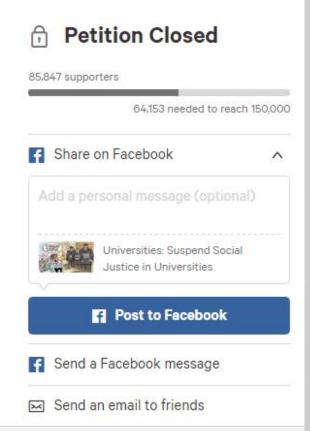
A website targeting university professors for spreading "leftwing propaganda" is raising fears of McCarthy-era tactics while also drawing ridicule.

Suspend Social Justice Courses





Social justice has become scientifically illiterate, logically unsound, deeply bigoted and openly supremacist. Social justice professors are indoctrinating young people into a pseudoscientific cult behind closed doors that is doing damage



eliever in everyone st when self-taught.



A book? I can find all the info I need online for free, thank you very much.

THE DEATH OF EXPERTISE

AGenius IRL

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The Campaign Against Established Knowledge and Why it Matters

9

DrMom_312

This title just sounds like yet another elitist appeal to authority.

TOM NICHOLS

Luv2Rea

And why do we care what this so called "expert" has to say???

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Rules of engagement: seven lessons from communicating above and below the line













Social media offers academics a wonderful opportunity to get their message "out there", to connect with, educate and inform a broad, new online audience. And universities encourage them to do so, to actively market and disseminate their research. Yet although this shouldn't be a one-way process, the standard mantra for engaging online is: don't read the comments. Based on his own experiences, and at a time when academics are

not always held in the highest regard by the general public, Philip Moriarty has some cautionary advice for those eager to embark on their own online public engagement activities.







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http://blogs.lse.ac.uk/impactofsocialsciences/2017/05/02/rules-ofengagement-seven-lessons-from-communicating-above-and-below-the-line/

Summing up

- Faulty rather than fraudulent research
- Health of research groups.
 - Drivers for behaviour
- Duty of care of universities.
 - Public engagement (impact) is two-way.