Editorial: A Welcoming Home for Applied Science

For most of its history, the *Physical Review* has focused on publishing long-lasting research in fundamental physics—be it a new state of matter, a powerful computational method, or a new way of observing the Universe [1]. But lasting research should also go far beyond the lab, improving the way humans communicate, treat disease, or measure the natural world. Accordingly, and building on its reputation for publishing fundamental physics, the *Physical Review* is enhancing its offerings for researchers who work on applied science.

Research around the world is evolving. Society as a whole is significantly investing in applied research in order to address humanity's biggest concerns, create new industries, and open new jobs. As just one example, the US National Science Foundation plans to allocate $450 million to its recently established Directorate for Technology, Innovation and Partnerships, which advances use-inspired research in all fields of science and engineering [2]. Major research challenges—climate change, big data, and quantum computing—will require that basic and applied research work in concert, and journals play an important role in melding ideas from all perspectives.

A key way that the *Physical Review* is welcoming applied science is through new journals. April 7 saw the launch of *PRX Energy*—a highly selective, open-access journal focused on energy science and technology research [3]. The papers featured in the journal's first issue cover a range of applications, including a technique that probes solar-cell properties and an analysis of the weather's effect on electricity pricing. The first issue also included a joint report from APS and Optica on methane emissions from the oil and gas sector, connecting scientific research with policies that could improve the health of the planet [4].

PRX Energy builds on a growing suite of publications with a focus on applied science. Launched in 2014, *Physical Review Applied* (PRApplied)—the first *Physical Review* journal devoted entirely to applied physics—invites high-quality papers that bridge the gap between engineering and physics and between current and future technologies. *Physical Review Materials* (PRMaterials), launched in 2017, is a similarly broad-scope journal publishing high-quality basic and applied research on materials.

PRApplied and PRMaterials are both multidisciplinary and bring together research from physics, chemistry, materials, biology, engineering, and beyond. They offer *Physical Review*'s trusted peer review with competitive decision times. Editors also raise the visibility of papers through Editors' Suggestions, social media, Review articles, and curated Collections—such as PRApplied's recently launched Collection on photovoltaic energy conversion [5].

The broad field of quantum science and technology (QST) exemplifies how curiosity-driven research leads to applications. These two facets come together in *PRX Quantum*, which launched in 2020 and soared to become a top-ranked QST journal. *PRX Quantum* supports an active section of "Perspective" articles [6]. Written by experts in the field, these forward-looking articles not only highlight recent results, but they also help to bridge theory, experiment, and technology.

All of these newer titles benefit from connections with established *Physical Review* journals. For instance, applied physics is explicitly covered by the three premier publications, *Physical Review Letters*, *Physical Review X*, and *Reviews of Modern Physics*. *Physical Review Letters*, in particular, is expanding its board of Divisional Associate Editors to have more expertise in applied physics. The journal also recently modified its acceptance criteria to specifically include applications with significant impact.

Keeping up with applied research across the *Physical Review* is easy through customized email alerts [7]. In addition to alerts from individual journals, you can choose subjects that cut across multiple journals, such as Applied Science, Engineering, and Technology; Quantum Science and Technology; and other broad areas.

As the *Physical Review* enhances its offerings, community input will be essential. For instance, high standards for peer review require excellent referees. We invite experts across all disciplines to sign up to be a referee [8]. And we continue to explore ways to gather feedback, whether via informal conversations or dedicated focus groups and surveys. With your feedback, our community-based journals can succeed in their mission to reflect the evolution of physics and to be the preeminent venue for the curation and dissemination of physics and physics-related research [9].

[1] Celebrating 125 Years of *The Physical Review*
[2] Directorate for Technology, Innovation and Partnerships.

[3] D. Scanlon and J. Otero, Editorial: Introducing PRX Energy - a New Open Access Journal for a Multidisciplinary Community, PRX Energy **1**, 010001 (2022).
[4] W. Collins, R. Orbach, M. Bailey, S. Biraud, I. Coddington, D. DiCarlo, J. Peischl, A. Radhakrishnan, and D. Schimel, Monitoring Methane Emissions from Oil and Gas Operations, PRX Energy **1**, 017001 (2022).
[5] *Physical Review Applied* Collection on Photovoltaic Energy Conversion.
[6] *PRX Quantum* Perspective Articles.
[7] *Physical Review* email alerts.
[8] Become a Referee.
[9] APS Strategic Plan: 2019.

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