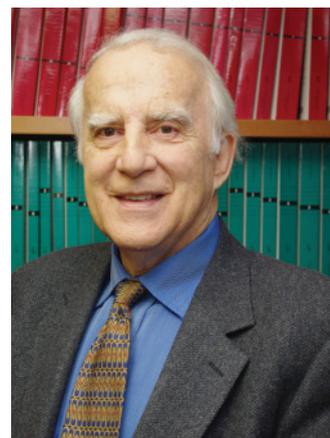


Editorial: Stepping Away

At the end of February 2012, I will be stepping away as Senior Editor of *Physical Review B*, a full-time position I have held since July 1969. I will, however, be continuing as an editor of the journal in a less expansive role. Dr. Laurens Molenkamp, based in the University of Würzburg, has been appointed Senior Editor beginning 1 March 2012. I wish him well in undertaking the management of this great journal.



The American Physical Society, whose membership now exceeds 50,000, has, as one of its goals, “to advance and diffuse the knowledge of physics.” It achieves this through the publication of its many and highly regarded journals. Note that the phrase is inclusive; it does not say; “Only the latest, hottest fields of study will be considered.” Good work in physics or any of its subfields will find a place in APS journals. This continuing achievement has been met by extraordinary groups of practicing scientists who have freely given their time to review submissions to the journals and by those scientists who have been appointed on a full- or part-time basis as editors of the journals. The concept has guided me throughout my 42-year tenure as an APS Editor.

When I was first appointed as Editor, the APS was in the process of considering how to move the organization from a paper-based system of editorial-operations management and from hot-metal printing as the mode for publication of the Phys. Rev. journals. Design and management of these diverse projects became my responsibility to such an extent that there was insufficient time available to continue with my research on a part-time basis at Brookhaven National Laboratory. In effect, I became an “early adopter” of the now much more common situation of well-trained physicists moving away from academia into other fields. I also gained significant administrative responsibilities under Samuel Goudsmit and James Krumhansl; also as Deputy to B. Chalmers Fraser and to David Lazarus. The tasks that we had brought upon ourselves were truly exciting but quite daunting. The software to create databases for referee information management and for processing manuscript and author information didn’t exist. Neither was there hardware sufficient to process editorial correspondence that contained scientific symbols. Nevertheless we ultimately prevailed.

Concurrently, work was progressing on the development of the software necessary to turn accepted manuscripts into the format suitable for direct printing of journal pages. The first predominantly photocomposed paper, written by P. L. Taylor of Case Western Reserve University, appeared in *Physical Review B* in the 1 April 1977 issue. The first photocomposed issue of the journal appeared a year later—*Physical Review B*, 1 April 1978—and over 250 papers on 2,000 pages were successfully photocomposed in that year. While the words and equations were digitally prepared, the text and predominantly hand-drawn figures were pasted together on boards to create the pages suitable for printing. In short order, production of all of the Phys. Rev. journals was converted to the digital composition of text and equations. The digital submission of figures subsequently followed. In 2011 the APS published online over 200,000 pages of scientific material. The development of the Internet and of web-based applications has resulted in an enormous increase in the speed and handling of current papers and in the development of the archival database, PROLA.

At the same time as the exciting R&D work was proceeding, PRB was growing as the worldwide archival journal of choice for solid state physics. In 1970, the first year as a separate journal, PRB submissions were 1,470 with 255 (17.3%) rejected. During the early years I was the sole editor responsible for referee selection and deciding the ultimate fate of these papers. By 2011 the number of submissions had risen to almost 10,200 annually (a total of 207,766 since the creation of PRB in 1970), now mostly handled in-house by 10 full-time multinational Ph.D. editors. About 45% of these papers were declined by the

journal. Reflecting the changing activities of the communities served by PRB the journal's subtitle was changed from *Solid State* then to *Condensed Matter* and then to *Condensed Matter and Materials Physics*. I fully anticipate that this evolution will continue. The country of origin of PRB submissions has also seen a notable shift during my tenure, a reflection that the journal is truly international. In 1970 the number of submissions from outside the US was about 25%. By 2011 this number had risen to around 80%. In 1980 a *Rapid Communications* section was created, intended to provide speedy publication of short, letters-type material. It was an immediate success and continues to be so.

The journal is effectively supported by an 18-member panel of distinguished scientists, which provides an interface with the community and, in particular, the resolution of publishability issues between authors and editors.

Throughout its life PRB has published the work of an estimated 400,000 authors including that of around 20 Nobel Prize winners.

Overall it has been quite a ride.

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