

**Ajzenberg-Selove F & Lauritsen T.** Energy levels of light nuclei. A=5-10. *Nucl. Phys. A* 227:1-244, 1974; **Ajzenberg-Selove F.** Energy levels of light nuclei. A=11-12. *Nucl. Phys. A* 248:1-152, 1975; **Ajzenberg-Selove F.** Energy levels of light nuclei. A=13-15. *Nucl. Phys. A* 268:1-204, 1976; **Ajzenberg-Selove F.** Energy levels of light nuclei. A=16-17. *Nucl. Phys. A* 281:1-148, 1977; and, **Ajzenberg-Selove F.** Energy levels of light nuclei. A=18-20. *Nucl. Phys. A* 300:1-224, 1978.

[University of Pennsylvania, Philadelphia, PA, and California Institute of Technology, Pasadena, CA]

These reviews discuss the experimental work that has led to our understanding of the spectroscopy of the nuclei with mass numbers A=5 to 20 ( $^3\text{H}$  to  $^{20}\text{Mg}$ ). In these articles, master tables and figures present the best values for the excitation energy, angular momentum, parity, isospin, lifetime, and decay properties of all known states of these light nuclei. [The *SCI*® indicates that these five papers have been cited in more than 305, 240, 200, 205, and 210 publications, respectively.]

## Thirty-Eight Years with the Light Nuclei

Fay Ajzenberg-Selove  
Department of Physics  
University of Pennsylvania  
Philadelphia, PA 19104-6396

In the late 1940s, Tom Lauritsen (1915-1973) and several of his colleagues at Caltech initiated the first of these review papers: It was 36 pages long. In 1952, having received my PhD at Wisconsin, doing experimental studies on the light nuclei, I spent the summer at Caltech working on a revision<sup>1</sup> of this article with Tom. We then continued our collaboration for 21 years, trying to cope with the flood of information being generated on the light nuclei. The last of the articles covering the entire mass range from A=5 to A=20 was published in 1959.<sup>2</sup> From 1966 on, we wrote yearly papers, ranging in length from 150 to 240 pages, on subsets of these nuclei. For instance, the five papers covered in this *Classic* were reviews of A=5-10 (1974), A=11-12 (1975),

A=13-15 (1976), A=16-17 (1977), and A=18-20 (1978). I have continued this work since Tom Lauritsen's death; but now, after 38 years, I have written the last of these reviews.<sup>3</sup> Ron Tilley and Henry Weller of the Triangle University Nuclear Laboratory, Durham, NC, are planning to continue this work.

It has been a ball! I have watched with enormous interest "my" nuclei become better understood. Typically 1,400 papers a year are published that either provide new information on the light nuclei or use the information to test everything from the Shroud of Turin to the Big Bang, from the presence of plastic explosives to the basic symmetries of nature. We have published some 26 reviews since 1952, totaling 4,779 pages. These reviews have been cited more than 5,440 times.

The usefulness of the reviews has brought me much personal pleasure, and they have given me the freedom to live the kind of life I enjoy. While I continued to do experimental work as a small-scale user of accelerators, principally at Los Alamos, my chief interest has been in teaching. I taught at Haverford College for 13 years, and then came to the University of Pennsylvania in 1970. The intellectual stimulation of working with very bright and very interesting students, the physics research, the writing of the reviews, and the friends I have from Alma-Ata to Auckland have all given me an exciting life—quite the best life I could ever have imagined.

1. **Ajzenberg-Selove F & Lauritsen T.** Energy levels of light nuclei. IV. *Rev. Mod. Phys.* 24:321-402, 1952. (Cited 250 times.)
2. -----, Energy levels of light nuclei. VI. *Nucl. Phys.* 11:1-340, 1959. (Cited 1,155 times.) [See also: **Ajzenberg-Selove F.** Citation Classic. *Current Contents/Physical, Chemical & Earth Sciences* 19(13):26, 26 March 1979. Reprinted in: *Contemporary classics in physical, chemical, and earth sciences*, (Thackray A, comp.) Philadelphia: ISI Press, 1986. p. 39.]
3. **Ajzenberg-Selove F.** Energy levels of light nuclei. A= 13-15. *Nucl. Phys. A* 523:1-196, 1991.

Received November 5, 1990