The standard of most of the papers published in this volume is high and the proceedings of the Conference on the Physics of IV–VI compounds and alloys was an important survey of the subject in 1972. Particularly interesting is the section on Transport Properties and Applications, although unfortunately – such is the pace of current device technology – this is at the same time the most out of date. A large number of the predictions have more recently been achieved: for example, liquid-phase epitaxy techniques have been used to construct double-heterostructure lead tin telluride diode lasers; c.w. operation has recently been achieved: for example, liquid-phase epitaxy of barium titanate. These materials, of which Mn-Zn ferrite is an example, are however conducting and the observed effect is due partly to the magnetic field produced in the crystal. The term ‘magnetoelectric’ did not appear in the commercial device market (since most present needs which can be met by these materials are better dealt with in other ways) there are some areas which merit further exploration. In the field of optoelectronics, considerable use is already made of electro-optic effects; magnetic field switching or modulation of the electro-optic behaviour of a crystal may prove of some interest. Conversely, the magnetic field modulation of Faraday rotators could provide a tool for the future optical communications engineer. Possibilities exist of generating and amplifying spin waves and for providing phase shifters and polarization rotators in the microwave region. Although the material in this book is two years old, it still gives a very useful view of this intriguing new field, and contains review material which provides an excellent introduction to the subject.

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