

Shavrov, V. G.; Shcheglov, V. I.**Magnetostatic waves in inhomogeneous fields.** (English) [Zbl 1471.78002](#)

Boca Raton, FL: CRC Press/CISP (ISBN 978-0-367-49447-6/hbk; 978-0-367-49449-0/pbk; 978-1-003-04622-6/ebook). xiv, 401 p. (2022).

Publisher's description: Magnetostatic waves (MSWs) in magnetodielectric media are fundamental for the creation of various highly efficient devices for analog information processing in the microwave range. These devices include various filters, delay lines, phase shifters, frequency converters, nonreciprocal and nonlinear devices, and others.

Magnetostatic Waves in Inhomogeneous Fields examines magnetostatic waves and their distribution in non-uniformly magnetized films and structures. The propagation of magnetostatic waves in magnetodielectric environments is accompanied by numerous and very diverse physical effects, sharply distinguishing them from ordinary electromagnetic waves in isotropic media. The authors address dispersion properties and noncollinearity of phase and group velocity vectors, as well as non-reciprocal propagation.

Key Features

- Offers mathematical tools used in the calculation of properties of magnetostatic waves
- Includes a current literature review of magnetostatic waves and domain structure in garnet-ferrite films
- Considers the issue of converting magnetostatic waves into electromagnetic ones

MSC:**78-02** Research exposition (monographs, survey articles) pertaining to optics and electromagnetic theory**78A40** Waves and radiation in optics and electromagnetic theory**Full Text:** [DOI](#)