in Davies (1980). Theorem 3.7 and Example 3.6 are taken from Schaefer (1985). The most interesting criterion of Thm.3.7 seems to be condition (c), since it gives a sufficient condition for the existence of eigenvalues for a sufficiently large class of semigroups. For semigroups induced by measure-preserving flows Theorem 3.8 and Corollary 3.9 are proven in Cornfeld-Fomin-Sinai (1982). Corollary 3.9 is a special case of the Halmos-von Neumann Theorem which classifies irreducible semigroups having discrete spectrum (see Cornfeld-Fomin-Sinai (1982), Greiner (1982) and Schaefer (1974) for the general result). Lemma 3.10 is taken from Groh (1984b) and Theorems 3.12 and 3.14 can be found (with slightly different proofs) in Greiner (1981).

Section 4. It was Derndinger (1980) who proved Theorem 4.2. In Cor.4.3 one can replace boundedness of the semigroup by the assumption that the resolvent grows slowly (see Greiner (1982)). Example 4.4 is due to Davies and Proposition 4.5 to Kellermann (both unpublished). The spectral decomposition for positive groups as described in Theorem 4.8 is valid in arbitrary Banach lattices (see Arendt (1982) and Greiner (1984c)). This also holds for Corollaries 4.9 and 4.10 . Proposition 4.11 and Example 4.12 indicate the relationship of positive groups to dynamical systems. For example, the 'Annular Hull Theorem' (see Chicone-Swanson (1981)) is closely related to the results of this section.