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**William Feldman\*** ([wfeldman@uark.edu](mailto:wfeldman@uark.edu)), Dept. of Mathematics, University of Arkansas, Fayetteville, AR 72701. *A vector lattice of nonlinear operators on Banach lattices satisfying a disjointness condition.* Preliminary report.

It is established that a class  $\mathcal{S}$  of nonlinear operators between Banach lattices with quasi-interior points (or a dense ideals in these lattices) form a vector lattice. This vector lattice is characterized in terms of properties of the representation of the Banach lattice as continuous extended real-valued functions on a compact space. The characterizations are most insightful in the case of Dedekind complete Banach lattices where the representation is on an extremally disconnected space. The operator  $T$  is in the class  $\mathcal{S}$  if there exists a natural number  $n$  (dependent on  $T$ ) so that if infimum of the image of any collection of  $n$  pairwise disjoint positive elements in  $E$  is zero and  $T$  satisfies conditions related to orthogonal additivity and monotonicity. Various limits of operators in  $\mathcal{S}$  are analyzed. (Received September 16, 2019)