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Some Classes of Banach Spaces with Normal Structure

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Abstract: In this paper, we prove that if a Banach space $(X, \|\cdot\|)$ has unconditional Schauder basis $\{e_n\}$ with unconditional basis constant c and has normal structure for weakly compact convex sets, then the equivalent renorming $(X, |\cdot|_\beta)$, (where $|x|_\beta = \max\{\|x\|, \beta q(x)\}$, $\beta > 0$, q is a seminorm on X) has normal structure for weakly compact convex sets under a suitable condition. Also, we give an alternate proof for normal structure of a k -uniform rotundity (k -UR) Banach space.

Keywords: Normal structure, fixed point property, unconditional basis, k -uniform rotundity (k -UR) Banach space.

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