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Xin Dong* (dong@uconn.edu), 341 Mansfield Rd, Monteith 402, Storrs, CT 06269, and **Bun Wong**. *Bergman-Calabi diastasis and Kähler metric of constant holomorphic sectional curvature.*

With Bun Wong at UC Riverside, we prove that for a bounded domain in \mathbb{C}^n with the Bergman metric of constant holomorphic sectional curvature being biholomorphic to a ball is equivalent to the hyperconvexity or the exhaustiveness of the Bergman-Calabi diastasis. By finding its connection with the Bergman representative coordinate, we give explicit formulas of the Bergman-Calabi diastasis and show that it has bounded gradient. In particular, we prove that any bounded domain whose Bergman metric has constant holomorphic sectional curvature is Lu Qi-Keng. We also extend a theorem of Lu towards the incomplete situation and characterize pseudoconvex domains that are biholomorphic to a ball possibly less a relatively closed pluripolar set. (Received August 29, 2021)