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**Generalized Calabi-Eckmann manifolds.** (English) [Zbl 1332.32022](#)

Subrahmanyam, P. V. (ed.) et al., Proceedings of the national symposium on mathematical methods and applications, NSMMA, Chennai, India, December 22, 2010. Invited talks. Chennai: Indian Institute of Technology Madras. 1-8 (2011).

From the introduction: *H. Hopf* [Zur Topologie der komplexen Mannigfaltigkeiten. Studies Essays, pres. to R. Courant, 167–185 (1948; [Zbl 0033.02501](#))] gave the first examples of compact complex manifolds which are non-Kähler by showing that  $\mathbb{S}^1 \times \mathbb{S}^{2n-1}$  admits a complex structure for any positive integer  $n$ . *E. Calabi* and *B. Eckmann* [Ann. Math. (2) 58, 494–500 (1953; [Zbl 0051.40304](#))] showed that product of any two odd dimensional spheres admit complex structures. We give an exposition of this celebrated work of Calabi and Eckmann and indicate directions in which their construction has been generalized. We content ourselves with mere statement of results and refer the reader to original sources where detailed proofs may be found.

For the entire collection see [\[Zbl 1300.00036\]](#).

**MSC:**

[32J18](#) Compact complex  $n$ -folds

**Keywords:**

[compact complex manifolds](#)