Groups and nonpositive curvature

General references are the books by Brison and Haefliger [BH99] and by Ballmann [Bal95]. Apart from that there are some book projects on geometric group theory that cover some of the topics [Bux, DK, Lö].

1. The CAT(0) property and basic group theoretic consequences [BH99, Sections I.8, II.1, II.2].
2. Hyperbolic groups and their boundaries [Gro87].
3. Coxeter groups are CAT(0) groups [Mou88], [Dav08, Chapter 12].
4. The symmetric space for $\mathrm{SL}_n(R)$ is CAT(0) [BH99, Chapter II.10] and Kramer's lecture notes.
5. CAT(0) groups do not have a unique boundary [CK00, Wil05].
6. Classification of isometries and the Flat Torus Theorem [BH99, Chapters II.6, II.7].
7. Fixed points of parabolic isometries [FNS06, CL10].
8. Limits of finite homogeneous spaces [Gel].
9. Asymptotic cones of CAT(0) spaces [KL95].
10. Divergence and cut-points of asymptotic cones [LB, DMS10].
11. Rank rigidity [BB00], [Bal95, Chapter IV].
12. Thompson's group F [Bux, Chapter 11].
13. Gromov's theorem on groups of polynomial growth [Gro81, vdDW84], [DK, Chapter V].
14. Dehn functions and isoperimetric inequality [Gro87, Bow95].

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