CLAIMS

1. A cement additive derived from a material comprising perovskite and silica, in which the cement additive comprises calcium sulfate and silica, with a ratio of silica to calcium sulfate of between 0.2 to 1.2, and whereby the cement additive has pozzolanic activity.

2. A cement additive according to Claim 1, in which the cement additive comprises a composition (A) obtained from a material comprising perovskite and silica, in which the composition (A) comprises calcium sulfate and silica.

3. A cement additive according to Claim 1 or 2, in which the cement additive comprises from 40% to 80% calcium sulfate and from 10% to 50% silica.

4. A cement additive according to Claim 2 or 3, in which the cement additive consists essentially of the composition (A).

5. A cement additive according to Claim 2, 3 or 4, in which the cement additive comprises one or more additional materials.

6. A cement additive according to Claim 5, in which the one or more additional materials comprises a composition (B) obtained in a process for the recovery of one or more metal from a material comprising perovskite and silica.

7. A cement additive according to Claim 6, in which composition (B) is a by-product of the process for recovery of one or more metal from a material comprising perovskite and silica.

8. A cement additive according to Claim 6, where the one or more additional materials comprises a feedstock used in a method for the recovering of one or more metal, or a derivative thereof.

9. A method of making a cement additive, the method comprising at least the steps of:

(i) sulphating a material comprising perovskite and silica to form a sulfated material;

(ii) separating a first composition comprising calcium sulfate and silica from one or more other components contained in the suflated material.

10. A method according to Claim 9, in which the method further comprises at least the steps of:

(iii) combining the first composition comprising calcium sulfate and silica with water and at least one compound to adjust the pH to from 4 to 9;

(iv) separating solids and liquids to obtain a second composition comprising calcium sulfate and silica.

11. A method according to Claim 9, in which the method further comprises at least the steps of:

(iii) combining the first composition comprising calcium sulfate and silica with water;

(iv) separating solids and liquids to obtain a second composition;

(v) combining the second composition with water and at least one compound to adjust the pH to from 4 to 9;

(vi) separating solids and liquids to obtain a third composition comprising calcium sulfate and silica.

12. A method according to Claim 10 or 11, in which the at least one compound to adjust the pH is chosen from calcium hydroxide and calcium oxide.

13. A method according to Claim 10, 11 or 12, in which the method further comprises the step of drying the first, second or third composition comprising calcium sulfate and silica.

14. A method according to any of Claims 9 to 13, in which the material comprising perovskite and silica has an average particle size of less than 180μm or a D90 <250 microns.

15. A method according to any of Claims 9 to 14, in which the method further comprises the step of combining a first composition according to Claim 9, a second composition according to Claim 10 or a third composition according to Claim 11 with one or more additional material to provide the cement additive.

16. A method according to Claim 15, in which the method further comprises the step of combining a first composition according to Claim 9, a second composition according to Claim 10 or a third composition according to Claim 11 with a composition (B) to provide the cement additive.

17. A method according to Claim 16, in which composition (B) is a composition obtained in a process for the recovery of one or more metal from a material comprising perovskite and silica.

18. A method according to Claim 17, in which composition (B) is a by-product of a process for recovery of one or more metal from a material comprising perovskite and silica.

19. A method according to any of Claims 15 to 18, in which the one or more additional materials or composition (B) comprises an ore, an ore concentrate, a slag and/or red mud.

20. A cement additive made by a method according to any of Claims 9 to 19.

21. A cement additive or a method according to any of Claims 1 to 20, in which the material comprising perovskite and silica is chosen from one or more of an iron making slag, an ore, an ore concentrate, a VTM slag, and red mud.

22. A cement comprising clinker and a cement additive according to any of Claims 1 to 8, 20 and 21.

23. A cement according to Claim 22 in which the cement consists essentially of: clinker and a cement additive of any of Claims 1 to 8, 20 and 21; or, clinker, a cement additive of any of Claims 1 to 8, 20 and 21 and one or both of limestone and a grinding aid.

24. A cement according to any of Claims 20 to 23, in which the cement produces a hardened mortar with a compressive strength of at least 30MPa at 7 days.

25. A cement according to any of Claims 20 to 24, in which the cement produces a hardened mortar with a compressive strength of at least 45MPa at 28 days.

26. A cementitious product comprising a cement additive according to any of Claims 1 to 8, 20 and 21 or a cement according to any of Claims 22 to 25.

27. A cementitious product according to Claim 26, in which the cementitious product is chosen from the group comprising concrete, mortar, grout and stucco.

28. An article comprising a hardened cementitious product according to Claim 26 or 27.

29. A method for making cement, the method comprising at least the step of combining a cement additive according to any of Claims 1 to 8, 20 and 21 with clinker.

30. A method for making cement, the method comprising at least the steps of any of Claims 9 to 19 and the further step of combining the cement additive with clinker.

31. A cement made by a method according to Claim 29 or 30.

32. A method of making a cementitious product, the method comprising at least the step of combining a cement according to any of Claims 22 to 25 with (a) water or (b) an aggregate and water.

33. A method of making a cementitious product, the method comprising at least the steps of a method according to Claim 30 to provide a cement and a further step of combining the cement with (a) water or (b) an aggregate and water.

34. A method according to Claim 32 or 33, in which the cementitious product is chosen from the group comprising concrete, mortar, stucco, and grout.

35. A cementitious product made by a method according to Claim 32, 33 or 34.