N,N-dimethylethanolamine, N,N-diethyl ethanolamine, N-methyl diethanolamine, N-ethyl diethanolamine, cyclohexylaminediethanol, and mixtures thereof.

15. The etching composition of claim 13, wherein the polyprotic acid is selected from the group consisting of citric acid, 2-methylpropane-1,2,3-triscarboxylic, benzene-1,2,3-tricarboxylic [hemimellitic], propane-1,2,3-tricarboxylic [tricarballylic], 1,cis-2,3-propenetricarboxylic acid [aconitic], e.g., butane-1,2,3,4-tetracarboxylic, cyclopentanetetra-1,2,3,4-carboxylic, benzene-1,2,4,5-tetracarboxylic [pyromellitic], benzenepentacarboxylic, and benzenehexacarboxylic [mellitic], and mixtures thereof.

16. The etching composition of claim 11, wherein the buffer composition comprises an ammonium compound and a polyfunctional organic acid.

17. A method of selectively enhancing the etch rate of silicon-germanium relative to silicon on a microelectronic device comprising silicon and silicon-germanium, the method comprising the steps of:

contacting the microelectronic device comprising silicon and silicon-germanium with an aqueous composition comprising: water; oxidizer; water-miscible organic solvent; fluoride ion source; and optionally a surfactant; and

rinsing the microelectronic device after the silicon-germanium is at least partially removed, wherein the selectivity of the etch for silicon-germanium over silicon is greater than about 10.

18. The method of claim 17 further comprising the step of drying the semiconductor device.

19. The method of claim 17 wherein the selectivity of the etch for silicon-germanium over silicon is greater than 10.

20. The method of claim 17 wherein the contacting step is performed at a temperature of from about 25 °C to about 100 °C.

21. The method of claim 17 wherein the water-miscible solvent is butyl diglycol.

22. The method of claim 17 wherein the surfactant is present.

23. The method of claim 17 wherein the surfactant comprises polyalkyleneimine.

24. The method of claim 17 wherein the fluoride ion source is selected from the group consisting of hydrofluoric acid, ammonium fluoride, quaternary ammonium fluorides such as, for example, fluoroborates, fluoroboric acid, tetrabutylammonium tetrafluoroborate, aluminum hexafluoride, and a fluoride salt of an aliphatic primary, secondary or tertiary amine having the formula:

$$R^1NR^2R^3R^4F,$$

wherein R^1, R^2, R^3 and R^4 individually represent H or a (C_1-C_4) alkyl group.

25. The method of claim 24 wherein the fluoride ion source is selected from the group consisting of ammonium fluoride, ammonium bifluoride, tetramethylammonium fluoride, tetraethylammonium fluoride, methyltriethylammonium fluoride, and tetrabutylammonium fluoride.