WHAT IS CLAIMED IS:

1. A method of preparing a compound selected from 2-hydrazinopyridine, (3-chloro-2-pyridyl)hydrazine, (6-chloro-2-pyridyl)hydrazine, and combinations thereof, the method comprising

    I) forming a mixture comprising

        A) a compound selected from 2-chloropyridine, 2,3-dichloropyridine, 2,6-dichloropyridine, and combinations thereof

        B) an inorganic hydrazine derivative;

        C) a phase transfer catalyst;

        D) an inorganic base or a salt; and

        wherein no organic solvent is present in the mixture; and

    II) reacting the mixture.

2. The method of claim 1, wherein the mixture further comprises an aqueous solvent comprising water.

3. The method of claim 2, wherein the aqueous solvent is water.

4. The method of claim 1, wherein the inorganic hydrazine derivative is selected from aqueous hydrazine, hydrazine hydrates, hydrazine salts, and combinations thereof.

5. The method of claim 4, wherein the inorganic hydrazine derivative is aqueous hydrazine comprising hydrazine monohydrate.

6. The method of claim 1, wherein the phase transfer catalyst is selected from tetra butyl ammonium chloride, tetra butyl ammonium bromide, aliquat-336, 18-crown-6, benzyltriethylammonium chloride, and combinations thereof.

7. The method of claim 6, wherein the phase transfer catalyst is aliquat-336.

8. The method of claim 1, wherein the inorganic base is selected from sodium hydroxide, potassium hydroxide, sodium carbonate, potassium carbonate, powdered potassium carbonate (400 mesh), potassium bicarbonate, sodium bicarbonate, dipotassium phosphate, tripotassium phosphate, disodium phosphate, trisodium phosphate, monosodium sodium methoxide, potassium t-butoxide, and combinations thereof.

9. The method of claim 8, wherein the inorganic base is potassium carbonate.

10. The method of claim 1, wherein the salt is selected from sodium sulfate, potassium sulfate, sodium chloride, potassium chloride, potassium iodide, and combinations thereof.

11. The method of claim 1, wherein the method step of reacting the mixture occurs at a temperature in the range of about 90 °C to about 115 °C.

12. The method of claim 1, wherein the method step of reacting the mixture occurs during a reaction time in the range of about 6 hours to about 30 hours.

13. The method of claim 1, wherein the method step of reacting the mixture occurs at a pressure in the range of about 1.0332 kg/cm^2 to about 5 kg/cm^2.