**CLAIMS:**

1. A vitrified superabrasive product, comprising:

a) a superabrasive component; and

b) a vitrified bond component in which the superabrasive component is dispersed, the vitrified bond includes an oxide of a lanthanoid, wherein the vitrified bond component defines pores that are essentially all less than 800 $\mu$m in diameter, seventy percent of which are in a range of between about 40 $\mu$m and about 500 $\mu$m, have an average aspect ratio less than about 2, and have a porosity in a range of between about 50% and about 90% of the total volume of the superabrasive product.

2. A grinding tool, comprising:

a) a base; and

b) a vitrified superabrasive component at a surface of the base, the vitrified superabrasive component including:

i) a superabrasive component; and

ii) a vitrified bond component in which the superabrasive component is dispersed, the vitrified bond component including an oxide of a lanthanoid, wherein the vitrified bond component defines pores occupying greater than about fifty percent of the total volume of the vitrified superabrasive component.

3. A vitrified superabrasive product, comprising:

a) a superabrasive component; and

b) a vitrified bond component in which the superabrasive component is dispersed, wherein the vitrified bond component defines pores that are essentially all less than 800 $\mu$m in diameter, seventy percent of which are in a range of between about 40 $\mu$m and about 500 $\mu$m, and have an average aspect ratio less than about 2,

wherein the vitrified superabrasive product has a Surface Roughness Index of not greater than about 35 Angstroms.

4. The vitrified superabrasive product of any of claims 1, 2, or 3, wherein the oxide of the lanthanoid includes an element having an atomic number not less than 57 and not greater than 60.

5. The vitrified superabrasive product of any of claims 1, 2, or 3, wherein the oxide of the lanthanoid is present in an amount in a range of between about 0.1 and about 10 volume percent of the vitrified superabrasive product.

6. The vitrified superabrasive product of any of claims 1, 2, or 3, wherein a majority of the pores are large pores having a median pore size of at least about 100 $\mu$m.

7. The vitrified superabrasive product of claim 6, wherein a large pore spacing distance between immediately adjacent large pores is not greater than a radial distance ($D_R$), wherein the radial distance ($D_R$) is defined as a measure of the average radius of the large pores.

8. The vitrified superabrasive product of claim 7, wherein the large pore spacing is not greater than about 0.5($D_R$) or not greater than about 0.25($D_R$) or not greater than about 0.1($D_R$).

9. The vitrified superabrasive product of claim 6, wherein a majority of the large pores are abutting each other.

10. The vitrified superabrasive product of claim 9, wherein at least about 75% of the large pores are abutting each other.

11. The vitrified superabrasive product of claim 6, wherein bond bridges comprising the vitrified bond material extend between the large pores.

12. The vitrified superabrasive product of claim 11, wherein the bond bridges comprise small pores having an aspect ratio of less than about 2 or less than about 1.5.

13. The vitrified superabrasive product of any of claims 1, 2, or 3, wherein the superabrasive component is present in an amount in a range of between about 0.1 and about 20 volume percent of the vitrified superabrasive product.

14. The vitrified superabrasive product of any of claims 1, 2, or 3, wherein the median particle size of the superabrasive component is in a range of between about 0.1 microns and about 60 microns or between about 0.1 microns and about 2 microns.

15. The vitrified superabrasive product of any of claims 1, 2, or 3, wherein the vitrified bond component includes at least one member selected from the group consisting of silicon dioxide ($SiO_2$), boron oxide ($B_2O_3$), aluminum oxide ($Al_2O_3$), alkali oxides ($Li_2O$, $Na_2O$, $K_2O$) and alkaline earth oxides (CaO, MgO, BaO).

CLAIMS:

1. A vitrified superabrasive product, comprising:

a) a superabrasive component; and

b) a vitrified bond component in which the superabrasive component is dispersed, the vitrified bond includes an oxide of a lanthanoid comprising cerium oxide, wherein the vitrified bond component defines pores that are essentially all less than 800 μm in diameter, seventy percent of which are in a range of between 40 μm and 500 μm, have an average aspect ratio less than 2, and have a porosity in a range of between 50% and 90% of the total volume of the superabrasive product, wherein the oxide of the lanthanoid is present in an amount in a range of between 0.1 volume percent and 10 volume percent of the vitrified superabrasive product.

2. The vitrified superabrasive product of claim 1, wherein a majority of the pores are large pores having a median pore size of at least 100 μm.

3. The vitrified superabrasive product of claim 2, wherein a large pore spacing distance between immediately adjacent large pores is not greater than a radial distance ($D_R$), wherein the radial distance ($D_R$) is defined as a measure of the average radius of the large pores.

4. The vitrified superabrasive product of claim 3, wherein the large pore spacing is not greater than $0.5(D_R)$ or not greater than $0.25(D_R)$ or not greater than $0.1(D_R)$.

5. The vitrified superabrasive product of claim 2, wherein a majority of the large pores are abutting each other.

6. The vitrified superabrasive product of claim 5, wherein at least 75% of the large pores are abutting each other.

7. The vitrified superabrasive product of claim 5, wherein bond bridges comprising the vitrified bond material extend between the large pores.

8. The vitrified superabrasive product of claim 7, wherein the bond bridges comprise small pores having an aspect ratio of less than 2 or less than 1.5.

9. The vitrified superabrasive product of claim 1, wherein the superabrasive component is present in an amount in a range of between 0.1 and 20 volume percent of the vitrified superabrasive product.

10. The vitrified superabrasive product of claim 1, wherein the median particle size of the superabrasive component is in a range of between 0.1 microns and 60 microns or between 0.1 microns and 2 microns.

11. The vitrified superabrasive product of claim 1, wherein the vitrified bond component includes at least one member selected from the group consisting of silicon dioxide ($SiO_2$), boron oxide ($B_2O_3$), aluminum oxide ($Al_2O_3$), alkali oxides ($Li_2O$, $Na_2O$, $K_2O$) and alkaline earth oxides (CaO, MgO, BaO).