CLAIMS

1. A power transfer system comprising:

a first coil coupled to a power source;

a second coil coupled to a load; and

a field-focusing element disposed between the first coil and the second coil and comprising a dielectric material, wherein the dielectric material comprises $Ca_{1-x-y}Ba_xSr_y(Ca_{1-z}Cu_z)Cu_2T_{4-\delta}Al_\delta O_{12-0.5\delta}$,

wherein $0 \leqq x, y < 0.5$; $0 \leqq z \leqq 1$; and $0 \leqq \delta \leqq 0.1$.

2. The system of claim 1, wherein at least one of x and y is greater than 0 when $\delta=0$.

3. The system of claim 1, wherein x and y are both greater than 0 when $\delta=0$.

4. The system of claim 3, wherein x and y are both greater than 0 and z=1 when $\delta=0$.

5. The system of claim 4, wherein the dielectric material comprises $Ba_{0.01}Sr_{0.2}Ca_{0.79}Cu_3Ti_4O_{12}$.

6. The system of claim 1, wherein x, y, and z are all equal to 0 and $\delta>0$.

7. The system of claim 6, wherein the dielectric material comprises $Ca_2Cu_2Ti_{3.94}Al_{0.06}O_{11.97}$.

8. The system of claim 1, wherein $x+y \leqq 0.3$.

9. The system of claim 1, wherein $\delta \leqq 0.6$.

10. The system of claim 1, wherein the dielectric material further comprises zirconium.

11. The system of claim 10, wherein the dielectric material comprises $Ca_2Cu_2Ti_{3.99}Zr_{0.01}O_{12}$.

12. The system of claim 1, wherein the dielectric material further comprises lanthanum.

13. The system of claim 1, wherein the dielectric material is a polycrystalline material comprising grains and grain boundaries.

14. The system of the claim 1, wherein the system further comprises a first coil coupled to a power source and spaced apart from the field-focusing element.

15. The system of the claim 14, wherein the system further comprises a second coil coupled to a load and spaced apart from the field-focusing element.

16. The system of the claim 15, wherein the field-focusing element is disposed between the first coil and second coil.

17. A power transfer system comprising:

a first coil coupled to a power source;

a second coil coupled to a load; and

a field-focusing element disposed between the first coil and the second coil and comprising a dielectric material, wherein the dielectric material comprises $Ca_{1-x-y}Ba_xSr_yCu_3Ti_4O_{12}$,

wherein $0<x<0.2$ and $0<y<0.2$.

18. The power transfer system of claim 17, wherein the field-focusing element comprises a plurality of resonators.

19. A power transfer system comprising:

a first coil coupled to a power source;

a second coil coupled to a load; and

a field-focusing element disposed between the first coil and the second coil and comprising a dielectric material, wherein the dielectric material comprises $Ca_{2-x-y}Ba_xSr_y Cu_2Ti_{4-\delta}Al_\delta O_{12-0.5\delta}$,

wherein $0 \leqq x < 0.2$; $0 \leqq y < 0.2$; and $0 < \delta \leqq 0.1$.

20. The power transfer system of claim 19, wherein the field-focusing element comprises a plurality of resonators.