

22. The composite of claim **18**, further comprising an additional member comprising the less ductile material or another material that can sinter-bond to the joining member by sintering, such that the joining member is an interlayer between the decorated more ductile material and the additional member.

23. The composite of claim **22**, wherein the more ductile material is a metal, the less ductile material decorated on the more ductile material is a ceramic, the joining member is a ceramic or cermet, and the additional member is a ceramic or cermet.

24. The composite of claim **23**, wherein the additional member is a dense piece and the joining member is a porous piece or particulate.

25. The composite of claim **21**, wherein the more ductile material is stainless steel and the less ductile material decorated on the more ductile material and the joining member are the ceramic YSZ.

26. The composite of claim **21**, wherein the more ductile material is stainless steel, the less ductile material decorated

on the more ductile material is YSZ, and the joining member is a mixed ionic-electronic conductor.

27. The composite of claim **22**, wherein the more ductile material is stainless steel and the less ductile material decorated on the more ductile material, the joining member and the additional member are the ceramic YSZ.

28. The composite of claim **27**, wherein the joining member is porous and the additional member is dense.

29. An electrochemical device, comprising:

a ceramic component;

a metal component;

an interface between the ceramic and metal components comprising particles of the ceramic or another ceramic decorated on the surface of the metal component and sintered to the ceramic component.

30. The device of claim **29**, wherein the metal is stainless steel and the ceramic is YSZ.

31. The device of claim **29**, wherein the device is a solid oxide fuel cell.

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