

Deposit Table 6 for Leinenweber et al. AM-12-013; DOI: <http://dx.doi.org/10.2138/am.2012.3844>

## Cell assemblies for reproducible multi-anvil experiments (the COMPRES assemblies)

KURT D. LEINENWEBER,<sup>1,\*</sup> JAMES A. TYBURCZY,<sup>2</sup> THOMAS G. SHARP,<sup>2</sup> EMMANUEL SOIGNARD,<sup>1</sup>  
TAMARA DIEDRICH,<sup>2,\*†</sup> WILLIAM B. PETUSKEY,<sup>1</sup> YANBIN WANG,<sup>3</sup> AND JED L. MOSENFELDER<sup>4</sup>

**TABLE 6a.** Drop-in parts list, 8/3 assembly

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LaCrO<sub>3</sub> sleeve<sup>a</sup>: OD = 3.60 mm, ID = 1.85 mm, L = 6.53 mm, Groove width = 1.0 mm, Groove depth = 1.5 mm, Groove angle = 148.0°.  
 Rhenium heater<sup>b</sup>: L = 8.0 mm, W = 5.4 mm, t = .0635 mm, with two 0.64 mm wide notches 2.2 mm apart and 2.0 mm deep, and ten slits 0.75 mm deep.  
 Alumina plug<sup>c</sup>: OD = 1.55 mm, L = 2.1 mm.  
 Graphite<sup>d</sup>/BN<sup>h</sup>/MgO<sup>i</sup> cup: OD = 1.57 mm, ID = 1.19 mm, Hole depth = 0.84 mm, L = 1.14 mm.  
 (Sample)  
 Graphite<sup>d</sup>/BN<sup>h</sup>/MgO<sup>i</sup> cap: OD = 1.57 mm, L = 0.38 mm.  
 Alumina thermocouple cover<sup>e</sup>: OD = 1.57 mm, L = 0.22 mm.  
 Thermocouple wire<sup>f</sup>: Type C, OD = 0.18 mm.  
 Alumina thermocouple insulator<sup>g</sup>: OD = 1.55 mm, ID = 0.41 mm (4 holes), L = 1.9 mm.  
 Mullite thermocouple sleeves<sup>j</sup>: OD = 0.8 mm, ID = 0.4 mm, L = 10 mm, ends cut at 45 degree angles.  
 ZrO<sub>2</sub>-based cement<sup>k</sup>: Cotronics 940 with activator.

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**TABLE 6b.** Drop-in parts list, 10/5 assembly

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LaCrO<sub>3</sub> sleeve<sup>a</sup>: OD = 4.32 mm, ID = 2.705 mm, L = 8.18 mm, Groove width = 1.0 mm, Groove angle = 141.8°.  
 Rhenium heater<sup>b</sup>: L = 9.75 mm, W = 8.25 mm, t = .0635 mm, with two 0.64 mm wide notches  
 ZrO<sub>2</sub> base plug<sup>c</sup>: OD = 2.56 mm, L = 0.99 mm.  
 MgO plug<sup>d</sup>: OD = 2.54 mm, L = 2.21 mm.  
 MgO sample sleeve<sup>e</sup>: OD = 2.54 mm, ID = 1.85 mm, L = 1.78 mm.  
 (sample/capsule)  
 Alumina thermocouple cover<sup>e</sup>: OD = 1.57 mm, L = 0.22 mm.  
 MgO thermocouple sleeve<sup>f</sup>: OD = 2.54 mm, ID = 1.61 mm, L = 2.21 mm.  
 Alumina thermocouple insulator<sup>g</sup>: OD = 1.55 mm, ID = 0.41 mm (4 holes), L = 1.9 mm.  
 Thermocouple wire<sup>f</sup>: Type C, OD = 0.18 mm.  
 Mullite thermocouple sleeves<sup>j</sup>: OD = 0.8 mm, ID = 0.4 mm, L = 10 mm, ends cut at 45 degree angles.  
 ZrO<sub>2</sub>-based cement<sup>k</sup>: Cotronics 940 with activator.

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**TABLE 6c.** Drop-in parts list, 14/8 step heater assembly (BGI style)

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MgO end sleeve (bottom)<sup>a</sup>: OD = 5.6 mm, ID = 3.8 mm, L = 2.0 mm.  
 ZrO<sub>2</sub> insulating sleeve (middle)<sup>b</sup>: OD = 5.6 mm, ID = 3.8 mm, L = 7.6 mm.  
 MgO end sleeve (top)<sup>c</sup>: OD = 5.6 mm, ID = 3.8 mm, L = 2.0 mm.  
 Mo plate (bottom)<sup>d</sup>: OD = 3.8 mm, L = 1.0 mm.  
 LaCrO<sub>3</sub> furnace sleeve (thin, bottom)<sup>e</sup>: OD = 3.8 mm, ID = 2.9 mm, L = 3.1 mm.  
 MgO plug (bottom)<sup>f</sup>: OD = 2.9 mm, L = 3.1 mm.  
 LaCrO<sub>3</sub> furnace sleeve (thick, middle)<sup>g</sup>: OD = 3.8 mm, ID = 2.6 mm, L = 2.7 mm.  
 MgO central sleeve<sup>h</sup>: OD = 2.6 mm, ID = 1.6 mm, L = 2.7 mm.  
 MgO spacer: OD = 1.6 mm, L = 0.35 mm.  
 Sample + capsule: OD = 1.6 mm, L = 2.0 mm.  
 Alumina thermocouple cover<sup>e</sup>: OD = 1.57 mm, L = 0.36 mm.  
 LaCrO<sub>3</sub> furnace sleeve (thin, top)<sup>i</sup>: OD = 3.8 mm, ID = 2.9 mm, L = 3.1 mm.  
 MgO thermocouple sleeve<sup>j</sup>: OD = 2.9 mm, ID = 1.8 mm, L = 3.1 mm.  
 Mo ring<sup>k</sup>: OD = 3.8 mm, ID = 1.8 mm, L = 1.5 mm.  
 Alumina thermocouple insulator<sup>g</sup>: OD = 1.55 mm, ID = 0.41 mm (4 holes), L = 1.9 mm.  
 Mullite thermocouple sleeves<sup>j</sup>: OD = 0.8 mm, ID = 0.4 mm, L = 10 mm, ends cut at 45 degree angles.  
 ZrO<sub>2</sub>-based cement<sup>k</sup>: Cotronics 940 with activator.

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**TABLE 6d.** Drop-in parts list, 14/8 "G2" box heater assembly

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ZrO<sub>2</sub> End sleeve<sup>a</sup>: OD = 6.32 mm, ID = 2.44 mm, L = 2.56 mm.  
 Molybdenum ring<sup>b</sup>: OD = 2.40 mm, ID = 1.70 mm, L = 3.40 mm.  
 Stuffing<sup>c</sup>: OD = 1.68 mm, L = 3.40 mm  
 ZrO<sub>2</sub> Middle sleeve<sup>d</sup>: OD = 6.32 mm, ID = 5.18 mm, L = 6.35 mm.  
 Graphite furnace sleeve<sup>e</sup>: OD = 5.16 mm, ID = 4.62 mm, L = 6.35 mm.  
 Graphite furnace end-sleeve<sup>f</sup>: OD = 4.60 mm, ID = 2.38 mm, L = 0.76 mm  
 MgO cap<sup>g</sup>: OD = 4.60 mm, L = 0.85 mm.  
 MgO sleeve<sup>h</sup>: OD = 4.60 mm, ID = 3.57 mm, L = 3.2 mm.  
 Capsule + sample: OD = 3.5 mm, L = 3.2 mm.  
 MgO end-sleeve<sup>i</sup>: OD = 4.60 mm, ID = 1.59 mm, L = 0.85 mm.  
 Alumina thermocouple cover<sup>e</sup>: OD = 1.57 mm, L = 0.36 mm.  
 Grooved ZrO<sub>2</sub> end-sleeve<sup>a</sup>: OD = 6.32 mm, ID = 2.44 mm, L = 2.67 mm, Groove width = 1 mm, Groove depth = 1.5 mm, Groove angle = 135.0°.  
 Grooved moly ring<sup>b</sup>: OD = 2.40 mm, ID = 1.70 mm, L = 3.40 mm, Groove width = 1 mm, Groove depth = 1.5 mm, Groove angle = 135.0°.  
 Alumina thermocouple insulator<sup>g</sup>: OD = 1.6 mm, ID = 0.41 mm (4 holes), L = 2.21 mm.  
 Mullite thermocouple sleeves<sup>j</sup>: OD = 0.8 mm, ID = 0.4 mm, L = 10 mm, ends cut at 45 degree angles.  
 ZrO<sub>2</sub>-based cement<sup>k</sup>: Cotronics 940 with activator.

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Note: The parts are listed in order of assembly. The superscript letters refer to the materials listed in Table 1.

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