CLAIMS

The invention claimed is:

1. A method comprising:

feeding via pneumatic dense phase feeding a matrix material into a mold cavity to form a desired cross-sectional shape, the matrix material comprising a plurality of binder particle and a plurality of active particles;

heating at least a portion of the matrix material so as to bind at least a portion of the matrix material at a plurality of sintered contact points, thereby forming a porous mass length;

cooling the porous mass length; and

cutting the porous mass length, thereby producing a porous mass.

2. The method of claim 1, wherein pneumatic dense phase feeding occurs at a feeding rate of about 1 m/min to about 800 m/min.

3. The method of claim 1, wherein pneumatic dense phase feeding occurs at a feeding rate of about 1 m/min to about 800 m/min and the mold cavity has a diameter of about 3 mm to about 10 mm.

4. The method of claim 1, wherein heating involves irradiating with microwave radiation the at least a portion of the matrix material.

5. The method of claim 4, wherein the matrix material further comprises a microwave enhancement additive.

6. The method of claim 1, wherein the mold cavity is at least partially formed by a paper wrapper.

7. The method of claim 1, wherein the binder particle has a hydrophilic surface treatment.

8. The method of claim 1 further comprising:

reshaping the cross-sectional shape of the porous mass length after heating.

9. The method of claim 1 further comprising:

reheating the porous mass length before cutting, thereby forming a second plurality of sintered contact point.

10. The method of claim 1 further comprising:

reheating the porous mass, thereby forming a second plurality of sintered contact point.

11. A method comprising:

feeding via pneumatic dense phase feeding a matrix material into a mold cavity to form a desired cross-sectional shape, the matrix material comprising a plurality of active particles and a plurality of binder particles having a hydrophilic surface modification;

heating at least a portion of the matrix material so as to bind at least a portion of the matrix material at a plurality of sintered contact points, thereby forming a porous mass length;

reshaping the cross-sectional shape of the porous mass length after heating;

cooling the porous mass length; and

cutting the porous mass length, thereby producing a porous mass.

12. The method of claim 11, wherein pneumatic dense phase feeding occurs at a feeding rate of about 1 m/min to about 800 m/min.

13. The method of claim 11, wherein pneumatic dense phase feeding occurs at a feeding rate of about 1 m/min to about 800 m/min and the mold cavity has a diameter of about 3 mm to about 10 mm.

14. The method of claim 11, wherein heating involves irradiating with microwave radiation the at least a portion of the matrix material.

15. The method of claim 14, wherein the matrix material further comprises a microwave enhancement additive.

16. The method of claim 11, wherein the mold cavity is at least partially formed by a paper wrapper.

17. The method of claim 11 further comprising:

reheating the porous mass length before cutting, thereby forming a second plurality of sintered contact point.

18. The method of claim 11 further comprising:

reheating the porous mass, thereby forming a second plurality of sintered contact point.

19. A method comprising:

feeding via pneumatic dense phase feeding a matrix material into a mold cavity to form a desired cross-sectional shape, the matrix material comprising a plurality of active particles, a plurality of binder particles having a

hydrophilic surface modification, and a microwave enhancement additive;

heating at least a portion of the matrix material by irradiating the matrix material with microwave irradiation so as to bind at least a portion of the matrix material at a plurality of sintered contact points, thereby forming a porous mass length;

reshaping the cross-sectional shape of the porous mass length after heating;

cooling the porous mass length; and

cutting the porous mass length, thereby producing a porous mass.

20. The method of claim 19 further comprising:

reheating the porous mass length before cutting, thereby forming a second plurality of sintered contact point.

CLAIMS

1. A method comprising:

feeding at a rate of 10 m/min to 800 m/min via pneumatic dense phase feeding a matrix material into a mold cavity having a diameter of 5 mm to 25 mm to form a desired cross-sectional shape, the matrix material comprising a plurality of binder particle and a plurality of active particles;

heating at least a portion of the matrix material so as to bind at least a portion of the matrix material at a plurality of sintered contact points, thereby forming a porous mass length;

cooling the porous mass length; and

cutting the porous mass length, thereby producing a porous mass.

2. The method of claim 1, wherein pneumatic dense phase feeding occurs at a feeding rate of about 1 m/min to about 800 m/min.

3. The method of claim 1, wherein pneumatic dense phase feeding occurs at a feeding rate of about 1 m/min to about 800 m/min and the mold cavity has a diameter of about 3 mm to about 10 mm.

4. The method of claim 1, wherein heating involves irradiating with microwave radiation the at least a portion of the matrix material.

5. The method of claim 4, wherein the matrix material further comprises a microwave enhancement additive.

6. The method of claim 1, wherein the mold cavity is at least partially formed by a paper wrapper.

7. The method of claim 1, wherein the binder particle has a hydrophilic surface treatment.

8. The method of claim 1 further comprising:

reshaping the cross-sectional shape of the porous mass length after heating.

9. The method of claim 1 further comprising:

reheating the porous mass length before cutting, thereby forming a second plurality of sintered contact point.

10. The method of claim 1 further comprising:

reheating the porous mass, thereby forming a second plurality of sintered contact point.

11. A method comprising:

feeding via pneumatic dense phase feeding a matrix material into a mold cavity to form a desired cross-sectional shape, the matrix material comprising a plurality of active particles and a plurality of binder particles having a hydrophilic surface modification;

heating at least a portion of the matrix material so as to bind at least a portion of the matrix material at a plurality of sintered contact points, thereby forming a porous mass length;

reshaping the cross-sectional shape of the porous mass length after heating;

cooling the porous mass length; and

cutting the porous mass length, thereby producing a porous mass.

12. The method of claim 11, wherein pneumatic dense phase feeding occurs at a feeding rate of about 1 m/min to about 800 m/min.

13. The method of claim 11, wherein pneumatic dense phase feeding occurs at a feeding rate of about 1 m/min to about 800 m/min and the mold cavity has a diameter of about 3 mm to about 10 mm.

14. The method of claim 11, wherein heating involves irradiating with microwave radiation the at least a portion of the matrix material.

15. The method of claim 14, wherein the matrix material further comprises a microwave enhancement additive.

16. The method of claim 11, wherein the mold cavity is at least partially formed by a paper wrapper.

17. The method of claim 11 further comprising:

reheating the porous mass length before cutting, thereby forming a second plurality of sintered contact point.

18. The method of claim 11 further comprising:

reheating the porous mass, thereby forming a second plurality of sintered contact point.

19. A method comprising:

feeding via pneumatic dense phase feeding a matrix material into a mold cavity to form a desired cross-sectional shape, the matrix material comprising a plurality of active particles, a plurality of binder particles having a hydrophilic surface modification, and a microwave enhancement additive;

heating at least a portion of the matrix material by irradiating the matrix material with microwave irradiation so as to bind at least a portion of the matrix material at a plurality of sintered contact points, thereby forming a porous mass length;

reshaping the cross-sectional shape of the porous mass length after heating;

cooling the porous mass length; and

cutting the porous mass length, thereby producing a porous mass.

20. The method of claim 19 further comprising:

reheating the porous mass length before cutting, thereby forming a second plurality of sintered contact point.