What is claimed:

1. Non-crystalline aspirin, wherein the non-crystalline aspirin does not crystallize during storage for at least about 30 days at a temperature of from about 20° to about 30°C.

2. The non-crystalline aspirin of claim 1, wherein non-crystalline aspirin does not crystallize during storage for at least about six months at a temperature of from about 20° to about 30°C.

3. The non-crystalline aspirin of either of claims 1 and 2, wherein the non-crystalline aspirin is microencapsulated.

4. A process for the preparation of non-crystalline aspirin, comprising applying laser radiation from at least two different lasers to a solution of aspirin in a solvent, and evaporating the solvent, wherein the laser radiation is optionally pulsed, having pulses with an effective average pulse length of no more than about 10^{-9} seconds, and the laser radiation from each laser is of a different wavelength.

5. The process of claim 4, wherein at least one of the lasers emits visible light.

6. The process of either of claims 4 and 5, wherein one laser emits radiation in the near UV to blue range, and one laser emits radiation in the red to near IR range.

7. The process of any of claims 4 to 6, wherein one laser emits radiation having a wavelength in the range of from about 400 to about 470 nm, and one laser emits radiation having a wavelength in the range of from about 620 to about 680 nm.

8. The process of any of claims 4 to 7, wherein the laser radiation is modified with a Strachan Device.

9. The process of claim 8, wherein the lasers are diode lasers.

10. The process of any of claims 4 to 9, wherein the laser radiation has an effective average pulse length of no more than about 10^{-12} seconds.

11. The process of any of claims 4 to 9, wherein the laser radiation has an effective average pulse length of no more than about 10^{-15} seconds.

12. The process of any of claims 4 to 11, further comprising applying the laser pulses from at least two different lasers simultaneously.

13. The process of any of claims 4 to 11, further comprising applying laser pulses from at least two different lasers in alternating sequences.

14. The process of any of claims 4 to 13, wherein the solvent is an alcohol.

15. The process of any of claims 4 to 13, wherein the solvent is an absolute alcohol.

16. The process of any of claims 4 to 15, further comprising obtaining a solution of aspirin in a solvent;

placing the aspirin solution in a covered container;

applying the pulses of laser radiation pulses to the aspirin solution; and

evaporating at least a portion of the solvent while applying the laser pulses, thereby forming non-crystalline aspirin.

17. The process of claim 16, further comprising heating the aspirin solution during the application of the laser pulses.

18. The process of claim 17, further comprising heating the solution to a temperature of about 100°C.

19. The process of any of claims 16 to 18, further comprising applying the laser radiation to the aspirin solution until the evaporation of the solvent is completed.

20. The process of claim 19, further comprising cooling the aspirin to room temperature as the solvent evaporates.

21. The process of any of claims 16 to 20, further comprising preventing evaporation of solvent for a period of time after the application of laser pulses is initiated, and then evaporating solvent while the application of laser pulses is continued.

22. The process of claim 21, further comprising applying the laser radiation of the solution until the evaporation of the solvent is completed.

23. The process of any of claims 16 to 22, further comprising applying the laser pulses from at least two different lasers simultaneously.

24. The process of any of claims 16 to 22, further comprising applying laser pulses from at least two different lasers in alternating sequences.

25. The process of any of claims 16 to 24, wherein the laser pulses are laser emissions modified with a Strachan Device.

26. A pharmaceutical composition, comprising the non-crystalline aspirin of claim 1.

27. A non-crystalline aspirin, having a PXRD pattern substantially as depicted in Figure 4, wherein the non-crystalline aspirin does not crystallize during storage for at least about 30 days at a temperature of from about 20° to about 30°C.

28. A process for preparing non-crystalline aspirin, the process comprising:

passing laser radiation through a Strachan Device, the Strachan Device comprising a first diffraction grating and a second diffraction grating and a refractive element positioned between the first and second diffraction gratings, canceling a portion of the laser radiation by destructive interference, and producing pulses of laser radiation by constructive interference;

applying the laser radiation passed through the Strachan Device to a solution of aspirin in a solvent; and

evaporating the solvent.

29. The process of claim 28, wherein the pulses of laser radiation have an effective average pulse length of no more than about 10^{-9} seconds.

CLAIMS

1. A stable, solid non-crystalline aspirin produced by the process of claim 4, wherein there is substantially no crystallization in an entire sample of the stable, solid non-crystalline aspirin during storage for at least about 30 days at a temperature of from about 20° to about 30°C.

2. The stable, solid non-crystalline aspirin of claim 1, wherein there is substantially no crystallization in the entire sample of the stable, solid non-crystalline aspirin during storage for at least about six months at a temperature of from about 20° to about 30°C.

3. The stable, solid non-crystalline aspirin of claim 1, wherein the non-crystalline aspirin is microencapsulated.

4. A process for the preparation of solid non-crystalline aspirin, comprising applying laser radiation from at least two different lasers to a solution of aspirin in a solvent, and evaporating the solvent, wherein the laser radiation has an effective average pulse length of no more than about 10^{-9} seconds, and the laser radiation from each laser is of a different wavelength.

5. The process of claim 4, wherein at least one of the lasers emits visible light.

6. The process of claim 4, wherein one laser emits radiation in the near UV to blue range, and one laser emits radiation in the red to near IR range.

7. The process of claim 4, wherein one laser emits radiation having a wavelength in the range of from about 400 to about 470 nm, and one laser emits radiation having a wavelength in the range of from about 620 to about 680 nm.

8. The process of claim 4, wherein the laser radiation is modified with a Strachan Device, the Strachan Device comprising a first diffraction grating, a second diffraction grating, and a refractive element positioned between the first and second diffraction gratings, wherein the Strachan Device cancels a portion of the laser radiation by destructive interference, and produces pulses of laser radiation by constructive interference.

9. The process of claim 8, wherein the lasers are diode lasers.

10. The process of claim 4, wherein the laser radiation has an effective average pulse length of no more than about 10^{-12} seconds.

11. The process of claim 4, wherein the laser radiation has an effective average pulse length of no more than about 10^{-15} seconds.

12. The process of claim 4, further comprising applying the laser pulses from at least two different lasers simultaneously.

13. The process of claim 4, further comprising applying laser pulses from at least two different lasers in alternating sequences.

14. The process of claim 4, wherein the solvent is an alcohol.

15. The process of claim 4, wherein the solvent is an absolute alcohol.

16. The process of claim 4, further comprising obtaining a solution of aspirin in a solvent;

placing the aspirin solution in a covered container;

applying the pulses of laser radiation pulses to the aspirin solution; and

evaporating at least a portion of the solvent while applying the laser pulses, thereby forming non-crystalline aspirin.

17. The process of claim 16, further comprising heating the aspirin solution during the application of the laser pulses.

18. The process of claim 17, further comprising heating the solution to a temperature of about 100°C.

19. The process of claim 16, further comprising applying the laser radiation to the aspirin solution until the evaporation of the solvent is completed.

20. The process of claim 19, further comprising cooling the aspirin to room temperature as the solvent evaporates.

21. The process of claim 16, further comprising preventing evaporation of solvent for a period of time after the application of laser pulses is initiated, and then evaporating solvent while the application of laser pulses is continued.

22. The process of claim 21, further comprising applying the laser radiation of the solution until the evaporation of the solvent is completed.

23. The process of claim 16, further comprising applying the laser pulses from at least two different lasers simultaneously.

24. The process of claim 16, further comprising applying laser pulses from at least two different lasers in alternating sequences.

25. The process of claim 16, wherein the laser pulses are laser emissions modified with a Strachan Device, the Strachan Device comprising a first diffraction grating, a second diffraction grating, and a refractive element positioned between the first and second diffraction gratings, wherein the Strachan Device cancels a portion of the laser radiation by destructive interference, and produces pulses of laser radiation by constructive interference.

26. A pharmaceutical composition, comprising the stable, solid non-crystalline aspirin of claim 1.

27. A stable, solid non-crystalline aspirin, having a PXRD pattern substantially as depicted in Figure 2, wherein there is substantially no crystallization in an entire sample of the stable, solid non-crystalline aspirin during storage for at least about 30 days at a temperature of from about 20° to about 30°C.

28. A process for preparing solid non-crystalline aspirin, the process comprising:

passing laser radiation through a Strachan Device, the Strachan Device comprising a first diffraction grating and a second diffraction grating and a refractive element positioned between the first and second diffraction gratings, wherein the Strachan Device cancels a portion of the laser radiation by destructive interference, and produces pulses of laser radiation by constructive interference;

applying the laser radiation passed through the Strachan Device to a solution of aspirin in a solvent; and

evaporating the solvent.

29. The process of claim 28, wherein the pulses of laser radiation have an effective average pulse length of no more than about 10^{-9} seconds.

30. A stable, solid non-crystalline aspirin produced by the process of claim 28, wherein there is substantially no crystallization in an entire sample of the stable, solid non-crystalline aspirin during storage for at least about 30 days at a temperature of from about 20° to about 30°C.

31. The stable, solid non-crystalline aspirin of claim 30, wherein there is substantially no crystallization in the entire sample of the stable, solid non-crystalline aspirin during storage for at least about six months at a temperature of from about 20° to about 30°C.

32. The stable, solid non-crystalline aspirin of claim 30, wherein the non-crystalline aspirin is microencapsulated.

33. A pharmaceutical composition, comprising the stable, solid non-crystalline aspirin of claim 30.