What is claimed is:

1. A microfluidic device comprising:

at least one inlet channel;

a microfluidic channel having a first portion fluidly connected to the at least one inlet channel; and

at least one outlet channel fluidly connected to a second portion of the microfluidic channel,

wherein the microfluidic channel has a plurality of dimples extending away from an axis of the microfluidic channel.

2. The microfluidic device of claim 1, wherein the at least one inlet channel includes a first inlet channel and a second inlet channel.

3. The microfluidic device of claim 1, wherein the at least one outlet channel includes a first outlet channel and a second outlet channel.

4. The microfluidic device of claim 1, wherein the plurality of dimples are arranged circumferentially around the microfluidic channel.

5. The microfluidic device of claim 4, wherein the plurality of dimples are arranged in sets that longitudinally overlap.

6. The microfluidic device of claim 1, wherein the plurality of dimples includes a first set of dimples arranged longitudinally along the microfluidic channel and a second set of dimples arranged longitudinally along the microfluidic channel, the first set of dimples and the second set of dimples are laterally offset, and the first set of dimples and the second set of dimples are configured to separate nanoparticles by size.

7. The microfluidic device of claim 6, wherein the first set of dimples have a first width or diameter, the second set of dimples have a second width or diameter of a second size, and the first width or diameter and the second width or diameter are different.

8. The microfluidic device of claim 7, wherein the first width or diameter is about 50 μm to about 200 μm, and the second width or diameter is about 200 μm to about 500 μm.

9. The microfluidic device of claim 6, wherein the at least one outlet channel includes a first outlet channel and a second outlet channel, the first set of dimples is arranged to guide nanoparticles of a first size to the first outlet channel, and the second set of dimples is arranged to guide nanoparticles of a second size to the second outlet channel.

10. The microfluidic device of claim 9, wherein the at least one outlet channel includes a third outlet channel, and the plurality of dimples includes a third set of dimples arranged longitudinally along the microfluidic channel.

11. The microfluidic device of claim 10, wherein the third set of dimples is configured to guide nanoparticles of the second size to the third outlet channel.

12. A microfluidic device comprising:

a plurality of inlet channels;

a microfluidic channel having a first portion fluidly connected to the plurality of inlet channels; and

a plurality of outlet channels fluidly connected to a second portion of the microfluidic channel,

wherein the microfluidic channel has a plurality of dimples extending away from an axis of the microfluidic channel.

13. The microfluidic device of claim 12, wherein the plurality of outlet channels includes a first outlet channel, a second outlet channel, and a third outlet channel.

14. The microfluidic device of claim 12, wherein the plurality of dimples includes a first set of dimples arranged to guide nanoparticles of a first size to the first outlet channel, a second set of dimples arranged to guide nanoparticles of a second size to the second outlet channel, and a third set of dimples arranged to guide nanoparticles of the second size to the second outlet channel.