

LISTING OF CHALLENGED CLAIMS
Claims 1-3, 5-14, 16-18, 20-22, 26-30
U.S. Patent No. 12,174,107

Claim Limitations	
1[pre]	A flow cytometer comprising:
1[a]	an optical fiber; and
1[b]	a wavelength division multiplexer (WDM) configured to receive light from the optical fiber, wherein the WDM comprises:
1[c]	an array of mirrors;
1[d]	an array of filters; and
1[e]	an array of avalanche photodiodes (APDs) configured to receive light that passed through one or more filters in the array of filters;
1[f]	wherein each of the filters in the array of filters is configured to receive light such that: a portion of the light passes through the filter; and another portion of the light is reflected; and
1[g]	wherein each of the mirrors in the array of mirrors is configured to: receive light reflected by a filter in the array of filters; and reflect light to another filter in the array of filters.
2	The flow cytometer of claim 1, wherein: the array of mirrors is substantially linear; the array of filters is substantially linear; and the array of APDs is substantially linear.
3	The flow cytometer of claim 2, wherein at least one of the mirrors in the array of mirrors is a concave mirror.
5	The flow cytometer of claim 3, wherein the WDM is configured such that a portion of an optical path between the array of mirrors and the array of filters forms a zig-zag pattern.
6	The flow cytometer of claim 5, further comprising a laser that is configured to emit blue light, yellow-green light, violet light, or ultraviolet light.
7	The flow cytometer of claim 6, wherein the flow cytometer is a benchtop flow cytometer.
8	The flow cytometer of claim 6, wherein the flow cytometer is compact.
9	The flow cytometer of claim 8, wherein the WDM is capable of detecting a substantially full spectrum of visible light.

Claim Limitations	
10	The flow cytometer of claim 6, wherein: the WDM further comprises a block comprising a first surface; and each of the filters in the array of filters is coupled to the first surface of the block.
11	The flow cytometer of claim 10, wherein the flow cytometer is a benchtop flow cytometer.
12	The flow cytometer of claim 10, wherein the flow cytometer is compact.
13	The flow cytometer of claim 6, wherein the WDM further comprises: an array of focusing lenses, wherein each of the focusing lenses in the array of focusing lenses is configured to focus light that passed through a filter in the array of filters to a spot on an APD in the array of APDs, wherein the spot has a diameter that is smaller than a diameter of a core of the optical fiber.
14	The flow cytometer of claim 13, wherein for each of the focusing lenses in the array of focusing lenses, the diameter of the spot is less than 1 mm.
16[pre]	A flow cytometer comprising:
16[a]	a flow cell configured to permit liquid to flow through the flow cell;
16[b]	a laser configured to project light into the flow cell;
16[c]	a multimode optical fiber configured to receive light from the flow cell; and
16[d]	a wavelength division multiplexer (WDM) configured to receive light from the multimode optical fiber, wherein the WDM comprises:
16[e]	a plurality of mirrors,
16[e][i]	wherein at least one of the mirrors is a concave mirror;
16[f]	a plurality of filters; and
16[g]	a plurality of avalanche photodiodes (APDs) configured to receive light that passed through one or more filters of the plurality of filters;
16[h]	wherein each of the plurality of filters is configured to receive light such that: a portion of light passes through the filter; and another portion of light is reflected; and

Claim Limitations	
16[i]	wherein each of the plurality of mirrors is configured to: receive light reflected by a filter of the plurality of filters; and reflect light to another filter of the plurality of filters.
17	The flow cytometer of claim 16, wherein the WDM further comprises: a plurality of focusing lenses, wherein each of the plurality of focusing lenses is configured to focus light that passed through a filter of the plurality of filters to a spot on an APD of the plurality of APDs, wherein the spot has a diameter that is smaller than a diameter of a core of the multimode optical fiber.
18	The flow cytometer of claim 17, wherein for each of the plurality of focusing lenses, the diameter of the spot is less than 1 mm.
20	The flow cytometer of claim 16, wherein the plurality of mirrors includes more than one concave mirror.
21	The flow cytometer of claim 20, wherein the WDM is configured such that a portion of an optical path between the plurality of mirrors and the plurality of filters forms a zig-zag pattern.
22	The flow cytometer of claim 21, wherein the laser is configured to emit blue light, yellow-green light, violet light, or ultraviolet light.
26	The flow cytometer of claim 22, wherein: the WDM further comprises a block comprising a first surface; and each of the plurality of filters is coupled to the first surface of the block.
27	The flow cytometer of claim 26, wherein the flow cytometer is a benchtop flow cytometer.
28	The flow cytometer of claim 26, wherein the flow cytometer is compact.
29	The flow cytometer of claim 28, wherein the WDM is capable of detecting a substantially full spectrum of visible light.
30	The flow cytometer of claim 29, wherein: the plurality of mirrors comprise five or more mirrors; and the plurality of filters comprise six or more filters.