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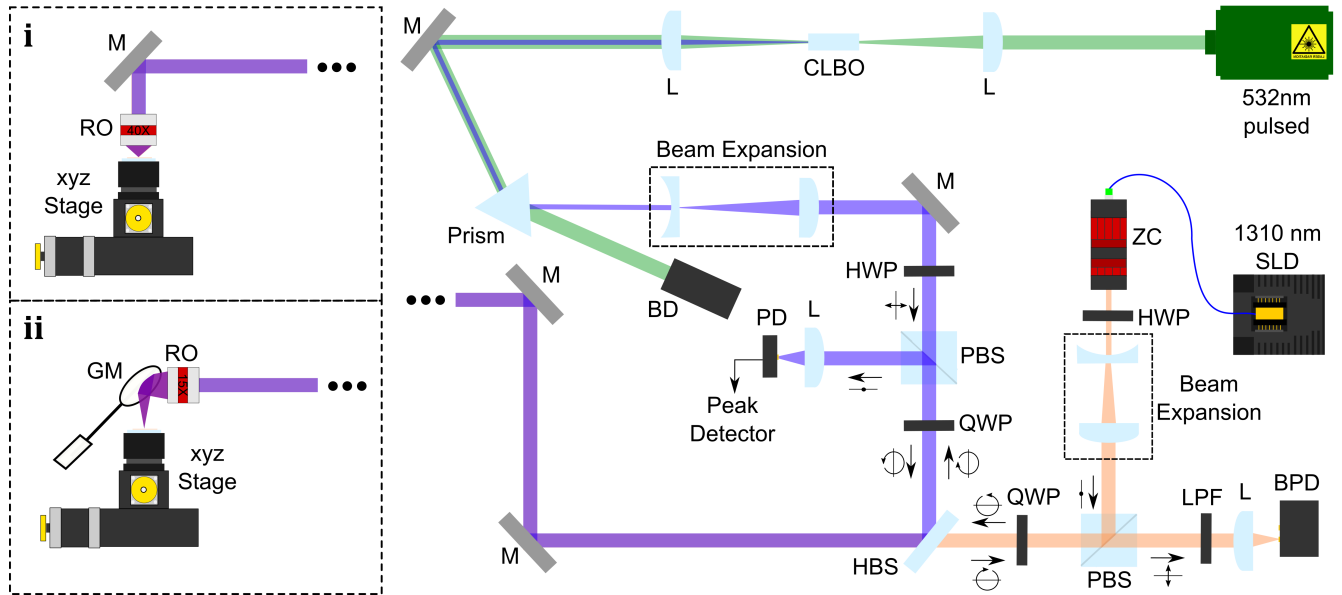


Figure 1. UV-PARS and UV scattering combined system architecture with interchangeable scanning modes: i) high-resolution stage scanning mode, and ii) high-speed lower resolution hybrid optomechanical scanning mode. L, lens; BS, beam splitter; CLBO, cesium lithium borate crystal; M, mirror; HWP, half-wave plate; QWP, quarter-wave plate; LPF, longpass filter; PBS, polarizing beam splitter; PD, photodiode; BPD, balanced photodiode; RO, reflective objective; ZC, zoom collimator; BD, beam dump; HBS, harmonic beam splitter; GM, galvanometer mirror; SLD, superluminescent diode.

	Pathologist 1			Pathologist 2			Pathologist 3			Mean over Pathologists		
Image	HD	ED	SQ	HD	ED	SQ	HD	ED	SQ	HD	ED	SQ
1 (VS)	2	2	2	3	2	2	2	1	1	2.33	1.67	1.67
2 (HS)	1	1	1	2	3	3	1	1	1	1.33	1.67	1.67
3 (VS)	2	2	2	3	2	2	1	1	1	2.00	1.67	1.67
4 (VS)	3	3	3	2	2	2	3	3	2	2.67	2.67	2.33
5 (HS)	2	2	2	2	3	2	3	3	2	2.33	2.67	2.00
6 (VS)	3	3	3	2	2	2	2	2	2	2.33	2.33	2.33
7 (HS)	2	3	3	1	2	1	2	3	3	1.67	2.67	2.33
8 (VS)	2	2	2	3	1	2	2	2	2	2.33	1.67	2.00
9 (HS)	2	3	2	2	1	2	3	3	3	2.33	2.33	2.33
10 (VS)	2	1	2	1	3	2	2	1	1	1.67	1.67	1.67
11 (HS)	3	2	2	2	1	2	3	3	3	2.67	2.00	2.33
12 (HS)	2	3	2	1	3	2	2	3	2	1.67	3.00	2.00
13 (VS)	1	2	1	2	3	2	2	3	2	1.67	2.67	1.67
14 (VS)	3	2	2	2	1	2	3	3	2	2.67	2.00	2.00
15 (HS)	2	2	2	1	1	1	2	2	2	1.67	1.67	1.67
16 (VS)	2	3	2	3	3	3	2	2	2	2.33	2.67	2.33
17 (HS)	2	2	2	2	2	2	1	2	1	1.67	2.00	1.67
18 (HS)	3	3	3	1	3	2	3	3	3	2.33	3.00	2.67
19 (VS)	2	3	2	2	3	3	3	2	3	2.33	2.67	2.67
20 (HS)	3	2	2	1	2	2	2	2	2	2.00	2.00	2.00
21 (HS)	2	2	2	1	1	1	1	1	1	1.33	1.33	1.33
22 (VS)	3	2	2	3	3	3	2	2	2	2.67	2.33	2.33
23 (HS)	2	2	2	1	1	1	1	2	1	1.33	1.67	1.33
24 (HS)	2	2	2	1	2	2	2	3	2	1.67	2.33	2.00
25 (VS)	2	3	2	2	3	3	2	2	3	2.00	2.67	2.67
26 (VS)	3	3	3	2	1	2	3	3	4	2.67	2.33	3.00
27 (VS)	2	3	2	2	3	3	2	2	2	2.00	2.67	2.33
28 (HS)	2	3	2	1	2	2	1	2	1	1.33	2.33	1.67
29 (HS)	2	2	2	1	1	1	2	2	2	1.67	1.67	1.67
30 (VS)	3	3	3	3	2	2	3	3	3	3.00	2.67	2.67
Mean over VS	2.33	2.47	2.20	2.33	2.27	2.33	2.27	2.13	2.13	2.31	2.29	2.22
Mean over HS	2.13	2.27	2.07	1.33	1.87	1.73	1.93	2.33	1.93	1.80	2.16	1.91
SEM over VS	0.16	0.17	0.14	0.16	0.21	0.13	0.15	0.19	0.22	0.10	0.11	0.11
SEM over HS	0.13	0.15	0.12	0.13	0.22	0.15	0.21	0.19	0.21	0.11	0.13	0.10

Table 1. Blinded pathology survey data results. VS, deep learning-enabled virtual H&E sample; HS, frozen section H&E-stained histological sample; HD, hematoxylin detail; ED, eosin detail; SQ, overall stain quality; SEM, standard error of the mean.