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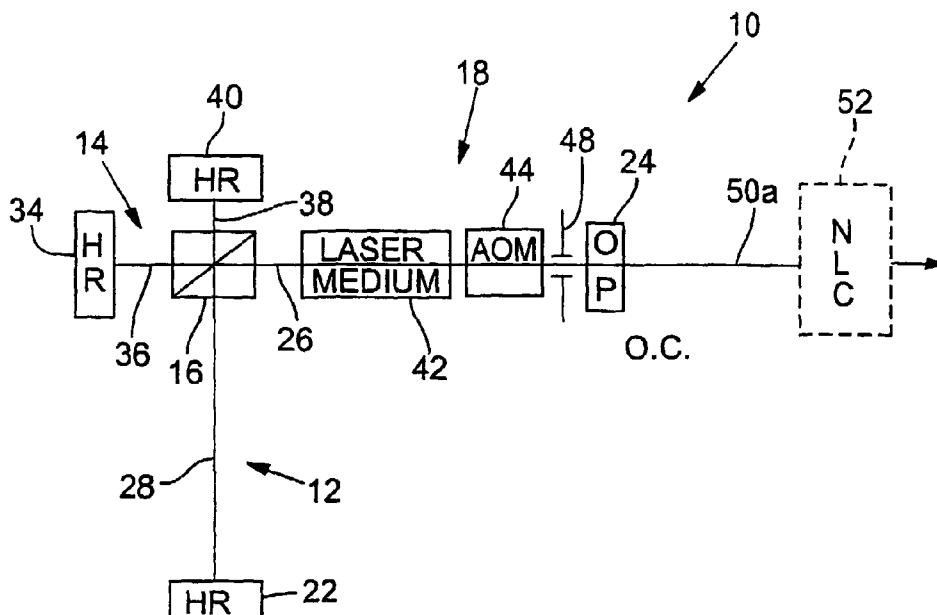
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(54) Title: METHODS AND SYSTEMS FOR SYNCHRONIZED PULSE SHAPE TAILORING



(57) Abstract: A plurality of subresonators (12, 14), having different design configurations, share a common resonator section (18) such that the lasing action can be substantially synchronized to provide coherent laser pulses that merge the different respective pulse energy profile and/or pulse width characteristics imparted by the configurations of the subresonators (12, 14). The subresonators (12, 14) may share a laser medium (42) in the common section, or each distinct subresonator section (28, 36) may have its own laser medium (42). Exemplary long and short subresonators (12, 14) generate specially tailored laser pulses having a short rise time and a long pulse width at one wavelength or two different wavelengths that may be beneficial for a variety of laser and micromachining applications including memory link processing.

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