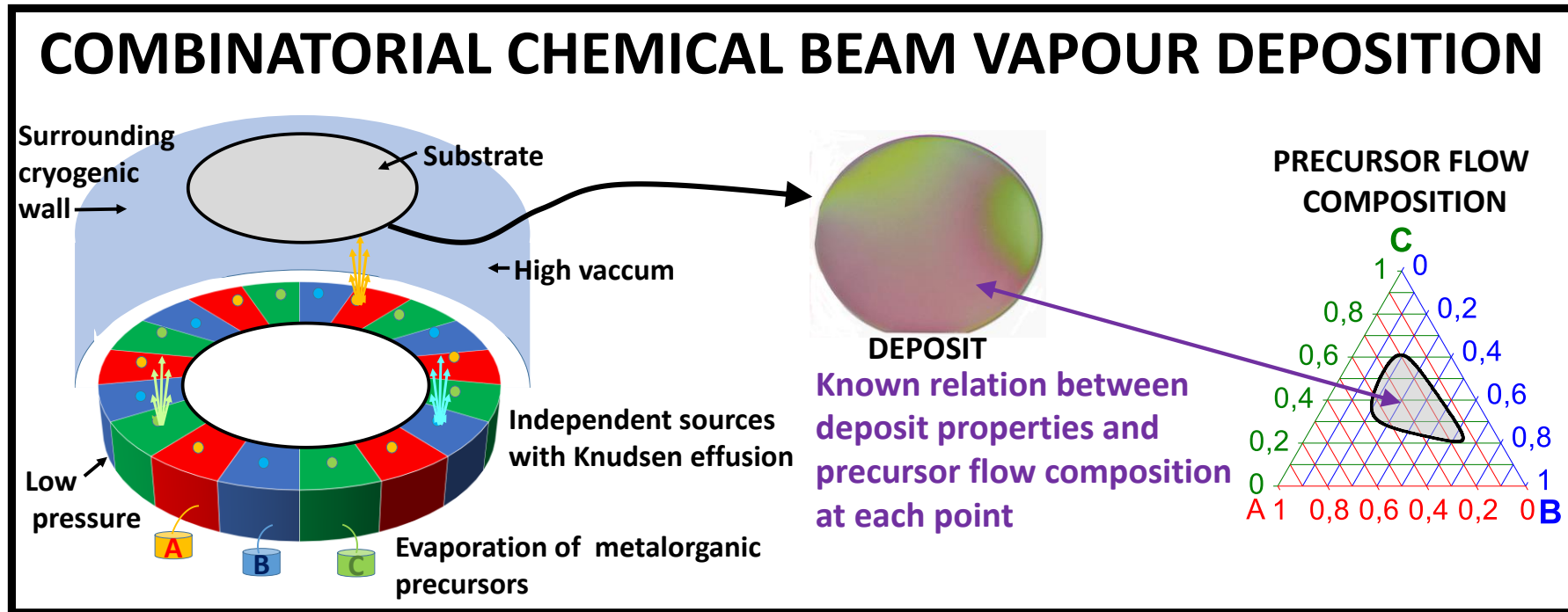


Multi-element combinatorial

One of its main advantages is that several elements are co-deposited from independent, oriented precursor beams without any gas phase reaction. This offers the opportunity to generate a variety of flow gradients from several different precursors across the surface of a substrate and thus obtain a material map over large areas. The desired functional property can be measured in order to identify the region of the film that exhibits the most favorable value. By using simple precursor flow simulations it is then possible to derive the deposition conditions necessary to reproduce the optimum composition across the entire surface of a substrate.



Presents a schematics of the combinatorial CBVD principle.

The combinatorial facility is obtained in the Sybilla 150 machines by the disposition of the precursors effusers, with 18 alternating effusers from precursor A, B and C, disposed on a ring, as presented schematically.