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Composition design of high entropy alloys using the valence electron concentration to balance strength and ductility

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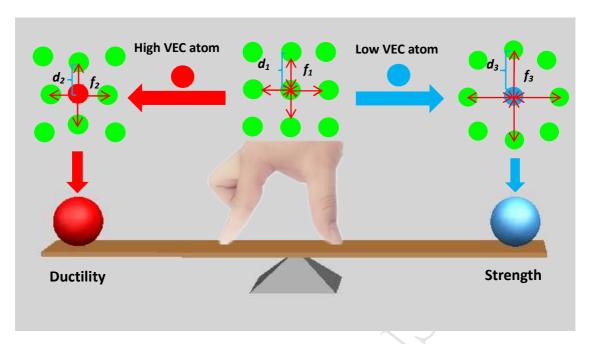
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We introduced a method for designing HEAs to balance strength and ductility. Matrix strength is improved by selecting an element with a VEC (valence electron concentration) lower than the average VEC of the matrix, while ductility is improved by selecting another element with a VEC higher than the average VEC for the matrix.

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