On Calculations for Wavelength Spectrometry

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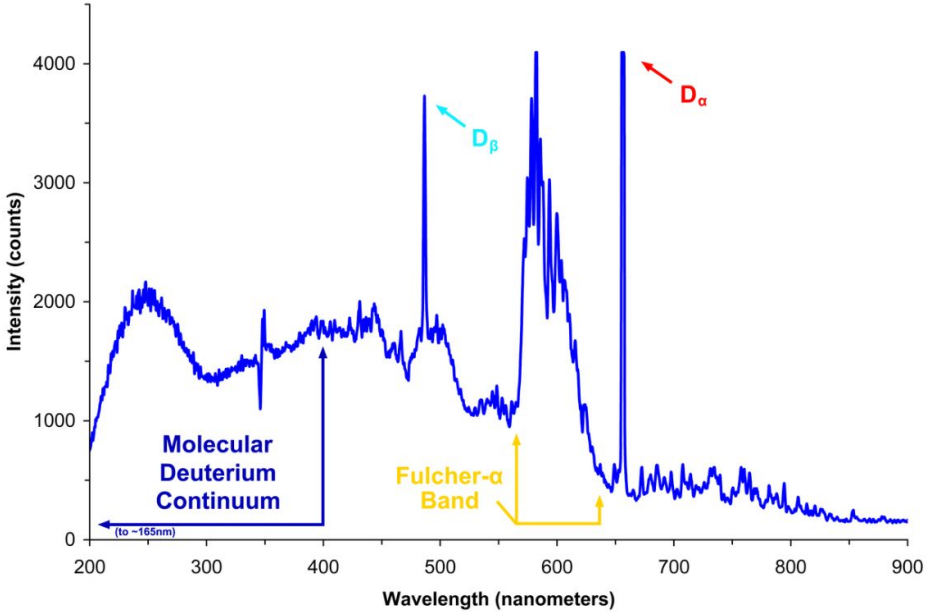
Spectrometry

Indicates chemical composition

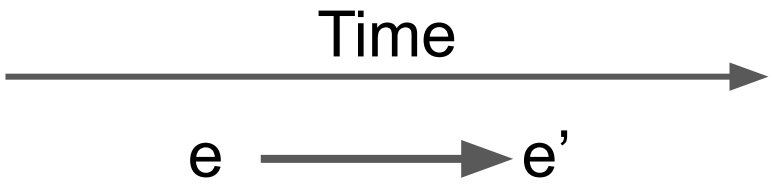
Based on emitted wavelengths



Chemical Reactions

$$2Na_{(s)} + 2HCl_{(aq)} \rightarrow 2NaCl_{(aq)} + H_{2\ (g)}$$

Or, more generally, for chemicals *e*, *e'*



Wavelength Calculus

Recall that $\lambda = v/f$

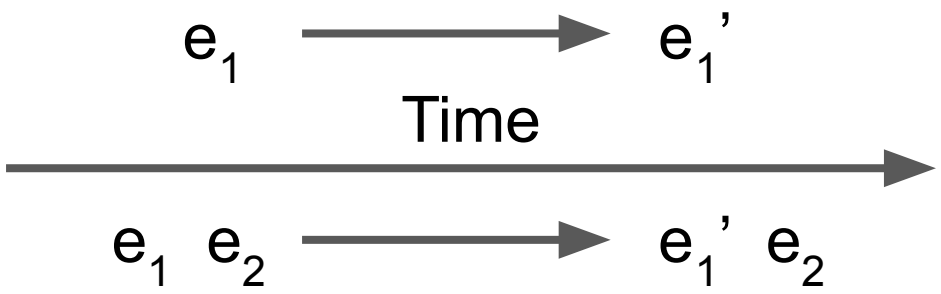
λ-calculus

λ-introduction	Mixing
$\lambda x.e$	$e_1 \ e_2$

What happens with mixing?

Complicated interactions in real time

“Some antics”



More antics

What about those wavelengths

Frequency

Time

v e ⟶ v e’

Mixing

Time

$$(\lambda x.\, e)\, v \rightarrow e\{v/x\}$$

Questions?