

# Analysis of purified ACP and PCP

SAND2012-7297P

PCP and ACP received from Jing Jiang of Blankenship laboratory.

- PCP is in 200 mM ammonium acetate – acetic acid, pH=5 and a bit of glycerol
- ACP is in 20 mM piperazine-HCl, pH = 5, 0.04% DDM and a bit of glycerol

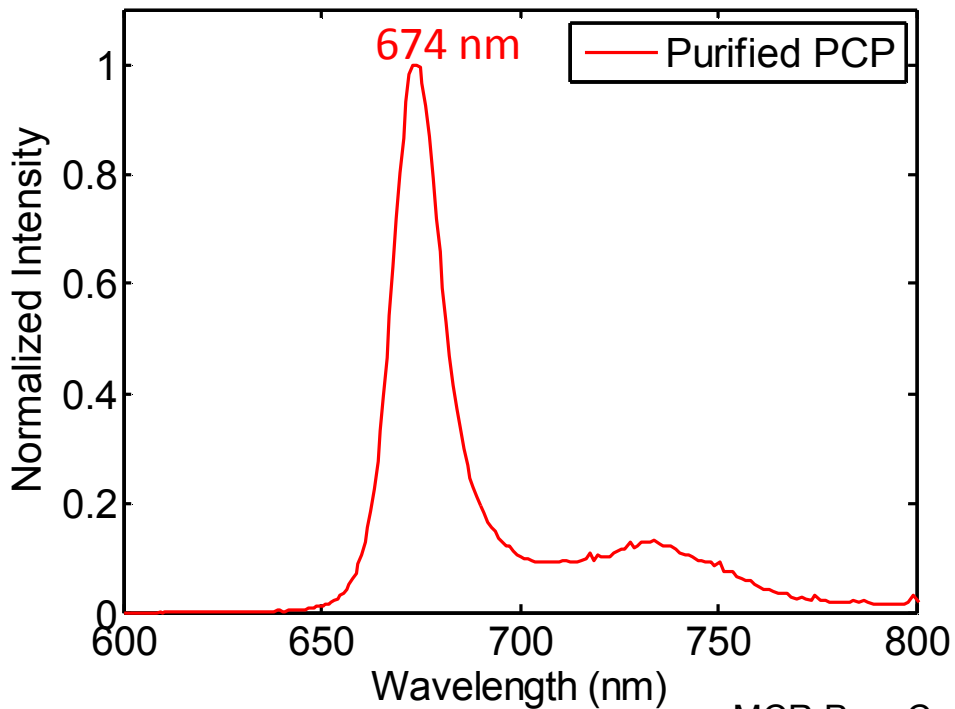
Samples were stored at -20C after arrival until imaging.

## Imaging parameters:

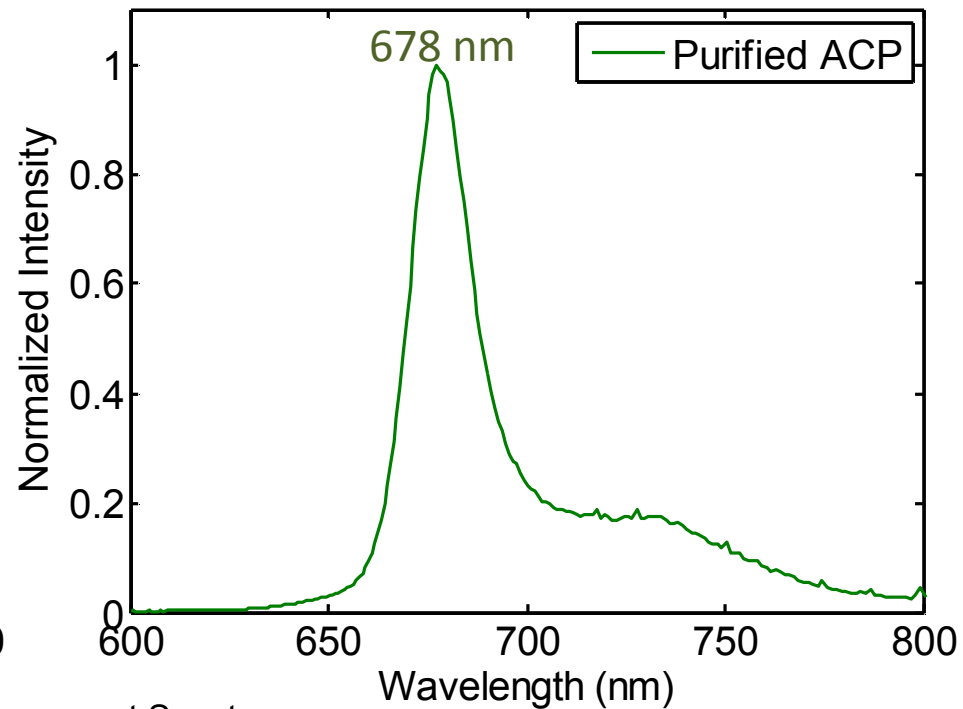
- 50 uL of each sample was loaded to a well-slide and covered with a #1.5 cover slip.
- Confocal detection volume from a 20X objective was positioned such that the entire FOV was within the sample
- Several images were acquired (>100,000 spectra) for each sample.
- Laser power was ~195 uW of 488 nm laser excitation.
- The wavelength axis of the images were calibrated against the lamp lines of a Krypton lamp.

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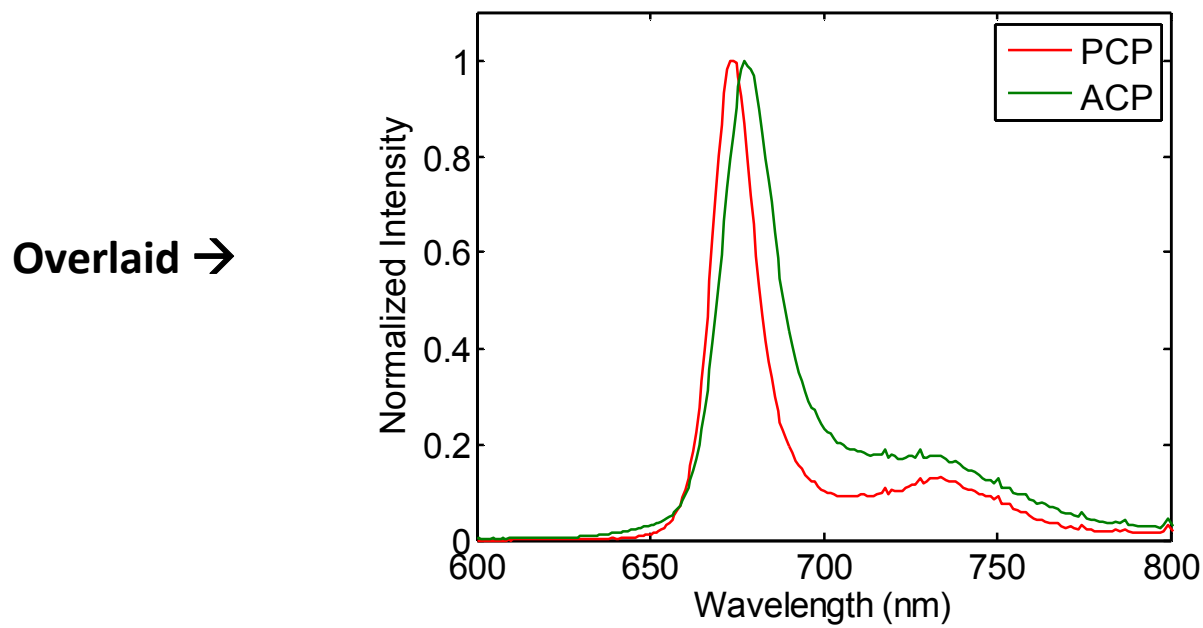
MCR Pure Component Spectra



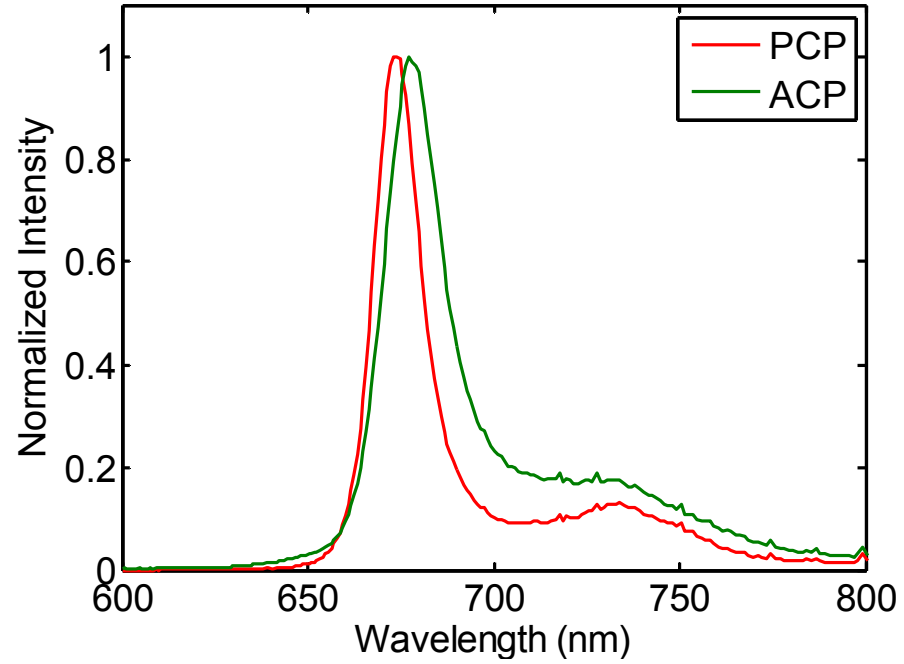
MCR Pure Component Spectra



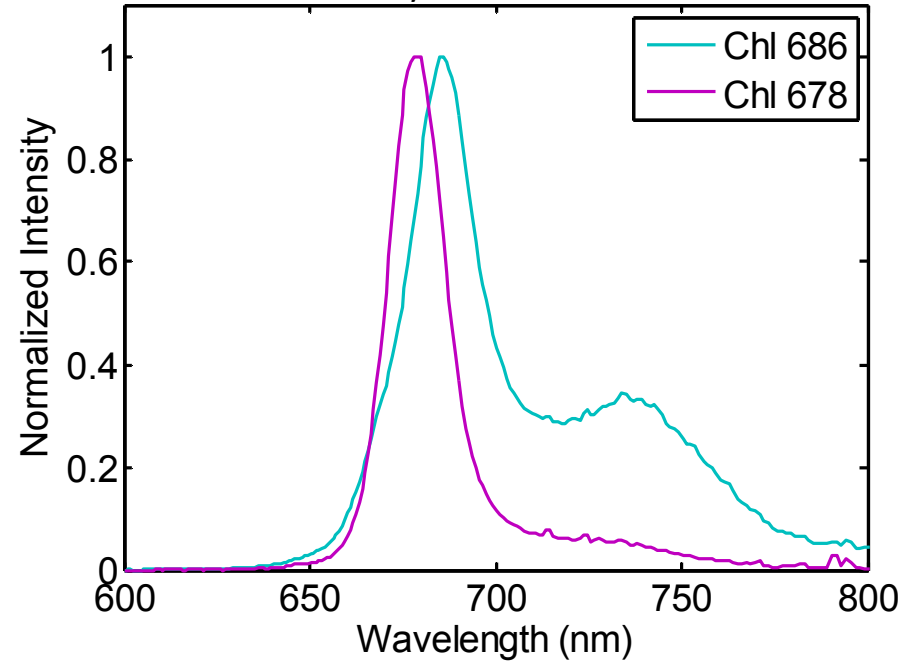
MCR Pure Component Spectra



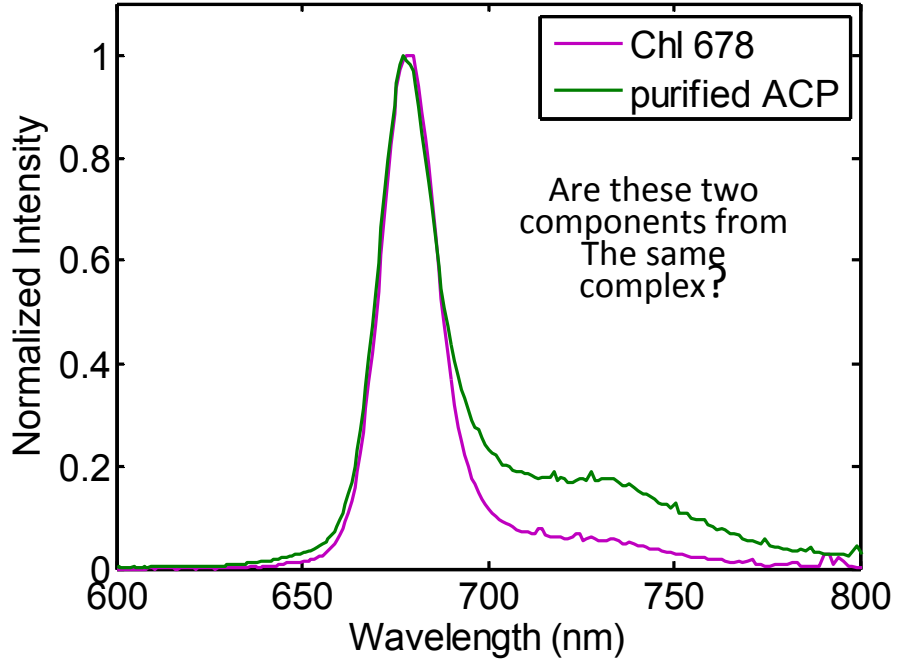
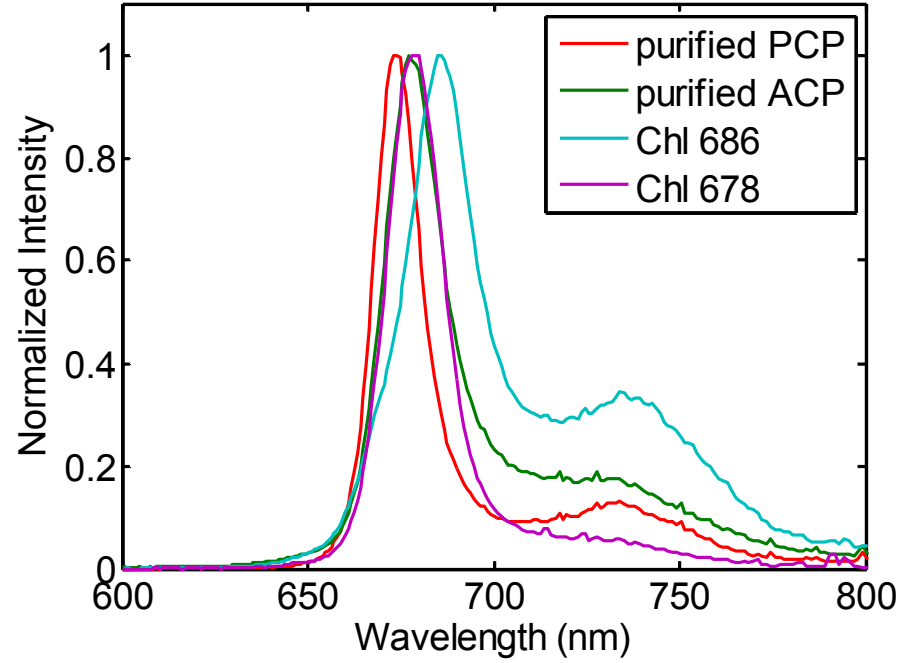
Purified complexes



Components from de novo analysis of Symbiodinium cells



All overlaid



- It seems as though the Chl 678 component from the de nova analysis of Symbiodinium cells is more similar to the ACP complex than the PCP complex in terms of peak emission wavelength.
- The purified PCP complex has an emission profile from our microscope that is nearly identical to Jing's BBA paper however, I do not find any emission components in cells that match PCP. Perhaps my CS156 or Clade C cells did not contain any PCP i.e. they are were stressed already?