

# 30 Years of Photodissociation Regions:

A symposium to honor David Hollenbach's lifetime in science  
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## The mid-infrared appearance of the Galactic Mini-Starburst W49A

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The massive star forming region W49A represents one of the largest complexes of massive star formation present in the Milky Way and contains at least fifty young massive stars and their PDRs which are still enshrouded in their natal molecular cloud. We employ *Spitzer*/IRS spectral mapping observations of the northern part of W49A to investigate the mid-infrared (MIR) spatial appearance of the polycyclic aromatic hydrocarbon (PAH) bands, PAH plateau features, atomic lines and continuum emission. We examine the spatial variations of the MIR emission components in slices through two of the ultra compact-H II (UC-H II) regions. We find that the PAH bands reproduce known trends, with the caveat that the 6.2  $\mu\text{m}$  PAH band seems to decouple from the other ionized PAH bands in some of the UC-H II regions – an effect previously observed only in one other object: the giant star forming region N66 in the LMC. Additionally, we examine the MIR appearance of star formation on various scales from UC-H II regions to starburst galaxies, including a discussion of the fraction of PAH emission in the 8  $\mu\text{m}$  IRAC filter. We find that the MIR appearance of W49A is that of a starburst on large scales yet its individual components are consistent with other galactic H II regions.