Q31a   Subaru and AKARI observations of supernova remnant G349.7+0.2

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We present the results of Subaru and AKARI infrared observations of supernova remnant (SNR) G349.7+0.2. G349.7+0.2 is one of the brightest SNRs detected in infrared waveband. The bright infrared emission is probably related to the interaction with nearby molecular cloud. Using AKARI 2.5-5 μm spectra, we have detected 3.3 μm polycyclic aromatic hydrocarbon (PAH) feature as well as bright molecular hydrogen (H_2) and hydrogen (H) recombination lines. In addition, we have obtained the high-resolution Subaru/IRCS 3.3 μm PAH image, showing PAH distribution associated with SNR. This is the first detection of 3.3 μm PAH feature in Galactic SNRs, where we can resolve the structure in detail. G349.7+0.2 provides a unique opportunity to study distributions of infrared features, due to its luminous infrared brightness.