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**Argon Adsorption on Open Carbon Nanohorns**[1] ANGEL CALVILLO, BRICE RUSSELL, ALDO MIGONE, Department of Physics, Southern Illinois University, Carbondale, IL 62901, USA, SUMIO IIJIMA, MASAKO YUDASAKA, National Institute of Advanced Industrial Science and Technology, Tsukuba 305-8565, Japan — We have measured adsorption isotherms for argon adsorbed on a 0.1692 g sample of chemically-opened carbon nanohorns. Two clear substeps are visible in the adsorption data, corresponding to groups of stronger binding sites (lower pressure substep) and weaker binding sites (higher pressure substep). We have measured adsorption at five different temperatures in the range between 70 and 90 K. The chemically-opened nanohorns have the space at the interior of the individual nanohorns accessible to adsorbates. Consequently, higher loadings are obtained on these samples compared to those for unopened (as-produced) nanohorns. Results for the kinetics of adsorption, the effective specific surface area, and the isosteric heat of adsorption as a function of sorbent loading will be presented and compared to results from other studies on nanohorns.

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