

Abstract Submitted
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Ethane adsorption on as-produced nanohorns¹ BRICE RUSSELL, ALDO MIGONE, Department of Physics Southern Illinois University, MASAKO YUDASAKA, SUMIO IJIMA, Japan Science and Technology Corp., NEC Corporation, Tsukuba 305-8501, Japan — We report on an ongoing adsorption isotherm study of ethane on as-produced (closed) single-walled carbon nanohorns. We have completed measurements at two temperatures: 130 K and 140 K. Steps in the logarithmic plots of the isotherms indicate the presence of two different groups of binding energy sites, which we interpret as corresponding to different sized pore regions in the nanohorn aggregates. We will present results of the application of the point B method for the determination of the effective monolayer capacity and for the effective specific surface area values at each temperature. The isosteric heat as a function of sorbent loading will be obtained from the isotherm data. The results obtained for ethane on the closed nanohorn aggregates will be compared to those previously obtained for ethane adsorbed on bundles of closed single-walled carbon nanotubes.

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Aldo Migone
Department of Physics Southern Illinois University

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