capable of producing critical temperatures and pressures with essentially the same degree of accuracy. The critical volumes of the aromatic hydrocarbons appearing in Table 3* have been calculated by the method of this investigation and also that of Lydersen (*2*). No absolute comparisons can be made on these calculated values since the literature background for the critical volumes of the aromatic hydrocarbons is limited to those of benzene and toluene. Comparisons of these calculated critical volumes shows a closer agreement for the simpler aromatic hydrocarbons. By the method of this investigation, critical volumes have also been calculated for the twenty-two aromatic hydrocarbons of Table 4* and are presented in this table along with the critical temperatures and pressures calculated for these compounds from their corresponding van der Waals' constants.

NOTATION

a = pressure van der Waals' constant, (cc./g.-mole)^2(atm.)
b = volume van der Waals' constant, cc./g.-mole
n_{ci}' = total number of carbon atoms present in alkyl side chains
n_{cn}' = total number of carbon atoms present in normal alkyl side chains
p_c = critical pressure, atm.
r = number of aromatic rings in nucleus
R = gas constant, 82.055 (cc.) (atm.)/(g.-mole)(°K.)
T_c = critical temperature, °K.
v_c = critical volume, cc./g.-mole
α_i = total number of branched alkyl chains attached to the aromatic nucleus
α_n = total number of normal alkyl chains attached to the aromatic nucleus
β = volume factor
β_a = volume factor for unsubstituted linearly fused aromatic hydrocarbons
β_{as} = volume factor for alkyl aromatic hydrocarbons
Δ = difference

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*See footnote on page 429.

ERRATA

Interpretation and Correlation of Ion Exchange Column Performance Under Nonlinear Equilibria

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The ordinate of Figure 1 should read: "Ratio of Breakthrough Slope to Column-apacity Parameter, $d(c/C_0)/dt$, at $c/C_0 = 0.5$; also equals $s \cdot V_{stoic}\ d(c/C_0)/dV$." ˈhe slopes in Figures 2 and 3 are correctly identified and conform to the slope-term ı Equation (15).

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