**Figure 1.** Time-dependent contact angle, CA(t), for:

1. Clean glass slide

x=[0.61655 119.723 242.0803333 361.074]%Time

y=[18.74033333 18.03116667 17.40713333 16.90416667] %Contact angle

e=[0.573224664 0.552688896 0.583359497 0.597334174]% standard deviation

1. Glass slide coated with oleic acid at a concentration of 0.28 , dissolved in pure ethanol.

x=[0.617424333 21.83756667 51.3645 76.58833333 102.036 122.9226667 152.9353333 203.0246667 240.8793333 361.983] %Time

y=[41.47163333 37.1437 35.61983333 35.24026667 34.84906667 34.6337 34.34763333 33.8938 33.5534 32.7847] %Contact angle

e=[2.302242677 3.371791027 3.549005354 3.506509376 3.46636609 3.399349764 3.384101768 3.331564726 3.366164584 3.300751873]; % standard deviation

**Figure 2.** Measured and predicted rise of deionized water in a uniform capillary tube of = 0.2 for:

1. Clean capillary tube

x=[0.05 0.2 0.5 1 4 50 100 150 200 240] ] %Time

y=[0.011997 0.023813 0.034245 0.042033667 0.051073333 0.051073333 0.051073333 0.051073333 0.051073333 0.051073333] %Capillary rise

e=[0.00121953 0.000977352 0.001169198 0.001143679 0.001649153 0.001649153 0.001649153 0.001649153 0.001649153 0.001649153]; ]; % standard deviation

1. Capillary tube coated with oleic water–ethanol solution

x=[0.2 1 3 6 8 10 12 20 50 100 150 200 250 300 350] %Time

y=[0.003245 0.007656 0.011335333 0.014183333 0.015565333 0.016268 0.016880333 0.018670333 0.021406 0.023231333 0.024296333 0.025033333 0.025619333 0.026203667 0.026617667] %Capillary rise

e=[0.000761756 0.001838402 0.00118448 0.000989008 0.00085861 0.000944547 0.001048255 0.001175835 0.001223799 0.001130208 0.000908179 0.000826794 0.000720081 0.000484947 0.000351839]; % standard deviation

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x=[10 20 50 100 150 200 250 300 350] %Time

y=[72.33333333 69.37 66.93833333 64.24666667 63.2 62.62666667 62.135 61.83333333 61.52866667] %Contact angle

e=[0.302140512 0.405544901 0.77320042 0.204178571 0.668331255 0.534249214 0.454037443 0.449691252 0.368696201]; % standard deviation

1. Capillary tube coated with ethanol solution

x=[0.2 1 3 6 10 12 20 50 100 150 200 250 300 350] %Time

y=[0.004977667 0.010825667 0.018588 0.022313667 0.023590333 0.023737 0.023737 0.023737 0.023737 0.023737 0.023737 0.023737 0.023737 0.023737] %Capillary rise

e=[0.002526164 0.002110143 0.000258152 0.000860514 0.000559269 0.000521357 0.000521357 0.000521357 0.000521357 0.000521357 0.000521357 0.000521357 0.000521357 0.000521357]; % standard deviation

**Figure 3.** Capillary rise dynamics of deionized water in a coated uniform capillary tube of = 0.35

x=[0.2 1 3 6 8 10 12 20 50 100 150 200 250 300 350] %Time

y=[0.002766 0.004308667 0.006819 0.009153667 0.009909667 0.010523333 0.010889333 0.011961 0.013218 0.013975667 0.014404 0.014691333 0.014991667 0.015209333 0.015332] %Capillary rise

e=[0.000590543 0.000989859 0.001118401 0.000641068 0.000470234 0.000371327 0.000297035 0.000130609 9.5572E-05 0.00016588 0.000259065 0.000339431 0.000219006 0.000149 0.000130453]; % standard deviation

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x=[10 20 50 100 150 200 250 300 350] %Time

y=[70.39033333 67.34433333 65.53666667 64.00966667 62.60333333 62.27466667 61.80066667 61.567 61.37033333] %Contact angle

e=[0.257514185 0.245044667 0.952552127 0.512783472 0.230988215 0.222748488 0.245765923 0.351215983 0.343998385]; % standard deviation