

LIST OF SYMBOLS

Symbol	Denotation
θ	Angle ($^{\circ}$)
ΔT	Temperature difference ($^{\circ}\text{C}$)
B	Full width of half maximum (radians)
b	Instrumental broadening (radians)
C_{bio}	Biogas yield (NmL/gVS)
CV_r	Coefficient of variation (%)
CV_t	Heating value of thread (kCal/kg)
CV_w	Heating value of wire (kCal/kg)
d	Mean crystallite size (nm)
d_j	Deviation of experimental and predicted value (NmL/gVS)
I_{002}	Intensity of highest peak of crystalline region (cps)
I_{am}	Lowest intensity of amorphous region (cps)
k	Rate constant
M	Cumulative biogas production (NmL/gVS)
m	Number of data pairs
M_m	Maximum biogas production (NmL/gVS)
n	Order
P	Probability
R^2	Coefficient of determination (%)
r_{bio}	Rate of conversion of sawdust into biogas (NmL/gVS.d)
R_m	Maximum biogas production rate (NmL/gVS.d)
S	Substrate concentration (g/L)
S_0	Initial substrate concentration (g/L)
t	Time (d)
X_i	Coded independent variable
X_j	Coded independent variable
Y	Predicted response

Y_j	Experimental biogas yield at jth value (NmL/gVS)
β	Effective line width (radians)
β_0	Constant regression coefficient
β_i	Coefficient for linear parameter
β_{ii}	Coefficient for quadratic parameter
β_{ij}	Coefficient of interaction parameter
ε	Residual associated with experiment
λ	Lag phase (d)
λ_1	X-ray wavelength (nm)