Electronic Appendix 1

Table S1. The main parameters for Artificial Neural Network (ANNs) construction

Parameter	Setting
Data preprocessing	$x_{processed} = \dfrac{(x - x_{min})}{x_{max} - x_{min}}$
Input	R value at 11 pointes of time(Fig.7 A)
Hidden layer number	5
Output	The glucose concentration(g/L)
Activation function	tansig: $y = \dfrac{2}{1 + e^{-2x}} - 1$
Training function	trainlm
Raining goal	Net.trainparam.goal=0.0004
Learning rate	Net.trainparam.lr=0.1