Supplemental Document

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Serum-based Raman spectroscopic diagnosis of blast-induced brain injury in a rat model: supplement

MEILAN GE,[1,2] YUYE WANG,[1,2,*] TONG WU,[3] HAIBIN LI,[1,2] CHUANYAN YANG,[4] TUNAN CHEN,[4] HUA FENG,[4] DEGANG XU,[1,2] AND JIANQUAN YAO[1,2]

[1] *School of Precision Instruments and Optoelectronics Engineering, Tianjin University, Tianjin 300072, China*
[2] *Key Laboratory of Optoelectronics Information Technology (Ministry of Education), Tianjin University, Tianjin 300072, China*
[3] *School of Marine Science and Technology, Tianjin University, Tianjin 300072, China*
[4] *Department of Neurosurgery and Key Laboratory of Neurotrauma, Southwest Hospital, Third Military Medical University (Army Medical University), Chongqing 400038, China*
[*] *yuyewang@tju.edu.cn*

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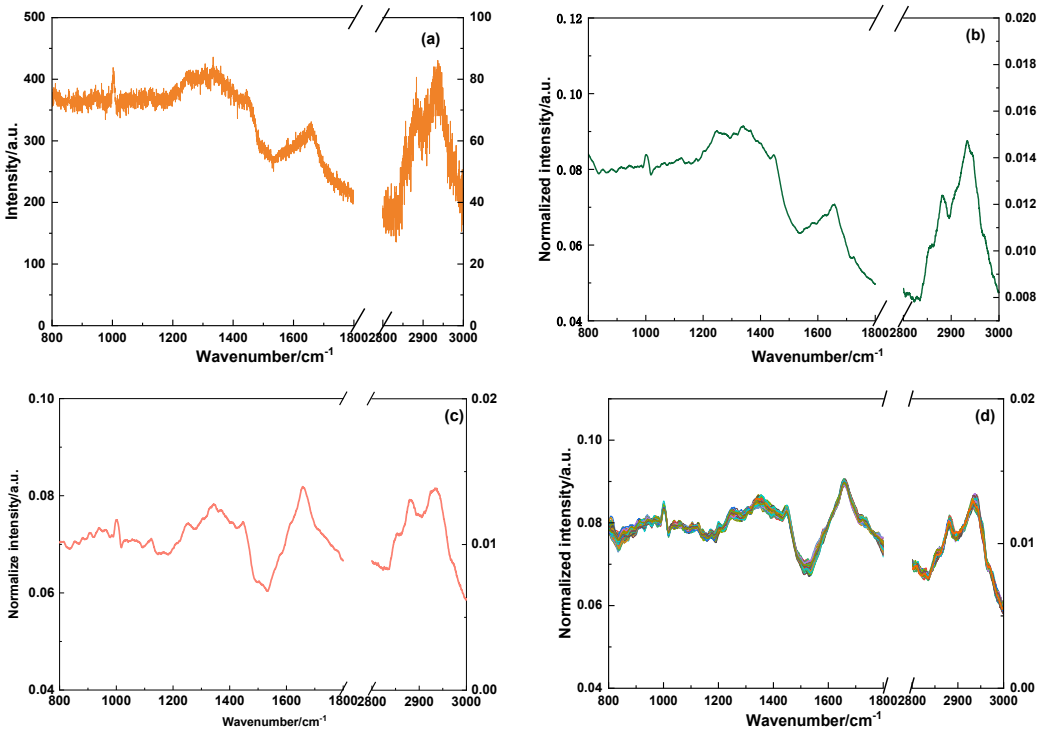

Fig.S1 (a) The raw Raman spectrum of the control group, the Raman spectra of control group after (b) denoising and (c) baseline correction, (d) the elimination outliers of the Raman spectra of the control group.

Table S1. The assignments of the Raman peaks of serum after bTBI.

Position/cm^{-1}	Assignments	Positions/cm^{-1}	Assignments
804	Cyclohexane	1205	Albumin; Tyrosine; Phenylalanine; Tryptophan; Hydroxyproline
810	Undefined	1247	Amide III, Proteins
855	C-C stretching, Proline; Collagen; Tyrosine; Glycogen	1272	C–H, Phospholipids, Fatty acids
877	Choline, Phospholipids	1304	Amide III, Protein; Fatty acid chains
905,913	Undefined	1312	CH_3 and CH_2 deformation, Collagen; Lipids; Nucleic acid
940	C-C stretching, Proline; Valine; Collagen	1344	CH deformation, Protein and Collagen
966	C-C stretching, Lipids	1395	C-H deformation, Lipids ; CH_3, CH_2 deformation, Collagen
1003	Ring breathing of phenylalanine, Protein	1415	C-H deformation
1030	Phenylalanine, Protein;Collagen	1446	CH_2 bending, Proteins and Lipids
1058	Undefined	1657	Amide I, C=C stretching, Lipids
1065	C-C stretching, Lipids	1723	Ester group, Phoshatidic acid
1074	C-C, Lipids	1778	Undefined
1102	Amide I, Proteins	2854	CH_2 symmetric stretching, Lipids
1126	C-N stretching, Proteins; Phosphplipids	2882	CH_2 asymmetric stretching, Lipids
1150	Carotenoids, Glycogen; Protein	2932	CH_3 symmetric stretching, Proteins
1172	C-H deformation, Protein; Nucleic acid		

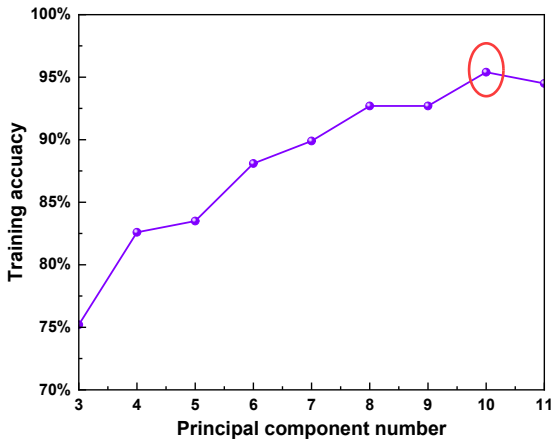

Fig. S2 The training accuracy of SVM classifier versus the PCs number.

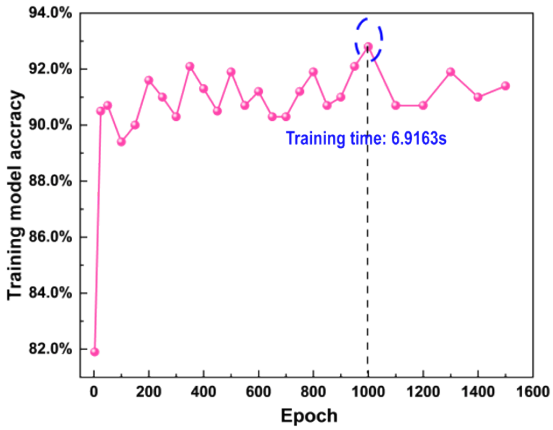

Fig.S3 The training accuracy of NN classifier with different epochs.