

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

REACTIVE SURFACES LTD., LLP

Petitioner

v.

TOYOTA MOTOR CORPORATION

Patent Owner

CASE: IPR2016-01914

Patent No. 8,394,618 B2

**REPLY DECLARATION OF DR. DAVID ROZZELL IN SUPPORT OF
PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 8,394,618
B2**

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A. It was well-known prior to the filing date of the ‘618 patent that fingerprints contain components degradable by a lipase, and a POSITA with a general knowledge of lipases would have known that a lipase would be capable of degrading those components to products of lower molecular weight and greater volatility.	11
B. Buchanan is analogous art and pertinent to the field of endeavor.	16
C. Mong, a reference cited and described in detail in the Dordick Declaration, supports the conclusions of Buchanan	19
D. Buchanan was a “printed publication” and accessible prior to the filing date of the ‘618 patent.....	21
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ATTACHMENTS:

- A. Résumé of Dr. David Rozzell
- B. “Immobilization of Enzymes by Covalent Attachment.” Chapter 20 in “Methods in Biotechnology, Vol. 17: Microbial Enzymes and Biotransformations,” edited by J. L. Barredo and published by Humana Press, Inc. Totowa, NJ, 2005. (Ex. 1049)
- C. “*Immobilization of Enzymes: Techniques and Applications*,” Chapter 13 in “Biocatalytic Production of Amino Acids and Derivatives: New Developments and Process Considerations,” Hanser Publishers, 1992. (Ex. 1050)
- D. “*Immobilized Aminotransferases for Amino Acid Production*”: J. David Rozzell, **1987**. *Methods in Enzymology*, 137, 479-497. (Ex. 1051)
- E. Ramotowski, R.S., in *Advances in Fingerprint Technology*, Chapter 3, pages 63-104. Henry C Lee and R. E. Gaensslen, eds., CRC Press, Boca Raton, 2001 (Ex. 1024)
- F. Wang, US Patent Appl. 2008/0119381 A1, Published May 22, 2008 (Ex. 1025)
- G. He et al, *Biochemical Engineering Journal* **2000**. 6, 7-11. (Ex. 1026)
- H. Kim et al, *Biotech. Bioeng.* **2001**. 72, 475-482. (Ex. 1027)
- I. *Enzyme Nomenclature* **1984**, published in 1984, Academic Press, New York, pages 270-279 (Ex. 1028)
- J. Asano et al, *J Forensic Sci.* **2002**. 47, 1-3. (Ex. 1029)
- K. Antoine et al, *J Forensic Sci.* **2010**. 55, 513-518. (Ex. 1030)
- L. World Patent Application WO 2007017701 A1, Publication date February 15, 2007. (Ex. 1031)
- M. Science News Article, April 15, 1997, printed copy from web site (Ex. 1032)
- N. Menzel, **1999** in “Fingerprint Detection with Lasers”, Chapter 7, pages 160, 178, reference 22 (Ex. 1033)

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- P. Jain et al, **2004**. Proceedings of Biometric Authentication Workshop, LNCS 3087, pages 259-269. (Ex. 1035)
- Q. Drozdowski et al, **1969**. J Am Oil Chem. Soc., 46, 371-376. (Ex. 1036)

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