

# Joel White Ph.D.

## Patents

**US Patent # 6649416 Intelligent electro-optical sensor array and method for analyte detection.**  
Inventors: John S. Kauer and Joel White.

**US Patent 7062385 Intelligent electro-optical nucleic acid-based sensor array and method for detecting volatile compounds in ambient air.** Inventors: Joel White and John S. Kauer.

## Peer Reviewed Papers since 1999

Alkasab, T.K., T.C. Bozza, T.A. Cleland, K.M. Dorries, T.C. Pearce, J. White, and J.S. Kauer (1999). **Characterizing complex chemosensors: Information theoretic analysis of olfactory systems.** *Trends Neurosci.* 22:102- 108.

Kauer, J.S. and J. White (2001). **Imaging and coding in the olfactory system.** *Annu. Rev. Neurosci.* 24:963-979.

Pearce, T., Verschure, P., White, J., Kauer, J. 2001. **Stimulus encoding during the early stages of olfactory processing: A modeling study using an artificial olfactory system.** *Neurocomputing* 38-40: 299-306

Alkasab, T.K., J. White, and J.S. Kauer (2002). **A computational system for simulating and analyzing arrays of biological and artificial chemical sensors.** *Chem. Senses* 27:261-275.

## Articles not Peer Reviewed

White, J. and J.S. Kauer (1999). **Odor recognition in an artificial nose by spatio-temporal processing using an olfactory neuronal network.** *Neurocomputing* 26-27:919-924.

Christensen, T.C. and J. White (2000). **Representation of olfactory information in the brain.** In: T.E. Finger, W.L. Silver, and D. Restrepo (eds), *Neurobiology of Taste and Smell, 2nd Edition.* John Wiley & Sons, Inc., New York, pp201-232.

White, J. and J.S. Kauer (2001). **Exploring olfactory population coding using an artificial olfactory system.** *Prog. Brain. Res.* 130:191-203.

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Kauer, J.S. and J. White (2003). **Representation of odor information in the olfactory system: from biology to an artificial nose.** In: F.G. Barth, J.A.C. Humphrey, and T.W. Secomb (eds), *Sensors and Sensing in Biology and Engineering.* Springer-Verlag, Berlin.

Quinn, R.D., Kauer, J.S., Willis, M.A., Ritzmann, R.E., Young, D., White, J. 2004. **A biologically inspired system for demining, UXO site remediation, and national security missions.** MINWARA meeting.

White, J., Wagonner, L.P., Kauer, J.S. 2004. **Explosives and landmine detection using an artificial olfactory system.** SPIE