高分子学会九州支部　外国人講演会

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Viscoelastic Windows of Pressure-sensitive Adhesives (PSAs)

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日時：　平成 18 **年** 10 **月** 19 **日（木）　午後** 4 **時～５時** 30 **分**

場所：　九州大学伊都キャンパス　西講義棟 3 3 **階** 4 **番講 義室**

Chang **博士は** Avery Dennison Corporate**（アメリカ）の** principal scientist **として、高分子物性制御に基づく接着剤の開発を行っていま す。 今回、九州大学で実験を行うことになりましたので、上記 講演会を企画致しました。多数御来聴下さいますよう御案内申し上げます。**

A viscoelastic window (VW) concept has been proposed to identify different types of pressure-sensitive adhesives (PSA's). Such viscoelastic windows are constructed from the values of dynamic storage modulus: G' and dynamic loss modulus G" at frequencies of 10-2 and 102 rad/sec. These frequencies are chosen because the range covers most of the time scales corresponding to the uses of PSA's at different application rates in performance tests. A four quadrant concept has also been recommended to categorize different types of PSA's based on the location of their VW's on the log-log cross plot of G' and G". It was found that for most PSA's, the range of G' and G" at room temperature within these selected frequencies falls between 103 and 106 Pa. The proposed four-quadrants (top-left hand quadrant of high G' and low G", top-right hand quadrant of high G' and high G", lower left hand quadrant of low G' and low G", and lower right-hand quadrant of low G' and high G") correspond respectively to (1) non-PSA or release coatings (2) high shear PSA's, (3) removable PSA's and medical PSA's and (4) quick and cold stick PSA's. It was also observed that the VW's of general purpose permanent PSA's occupy the central region, which straddles part of the four quadrants.

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