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Nondestructive Method of Measuring Relative Concentration of Gases (*e.g.* Argon) in Double-Pane Windows

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A DC electrical discharge was used to obtain information on the presence of gaseous species (*e.g.* argon) inside a laboratory model of a double-pane window. The relative concentrations of additive gases (*e.g.* argon) were measured using the optical emission in the spectral region from near ultraviolet to near infrared (NIR). The amount of argon in air can be determined using our method with a precision of 10% at low concentrations and approximately 5% at moderate to high concentrations.

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