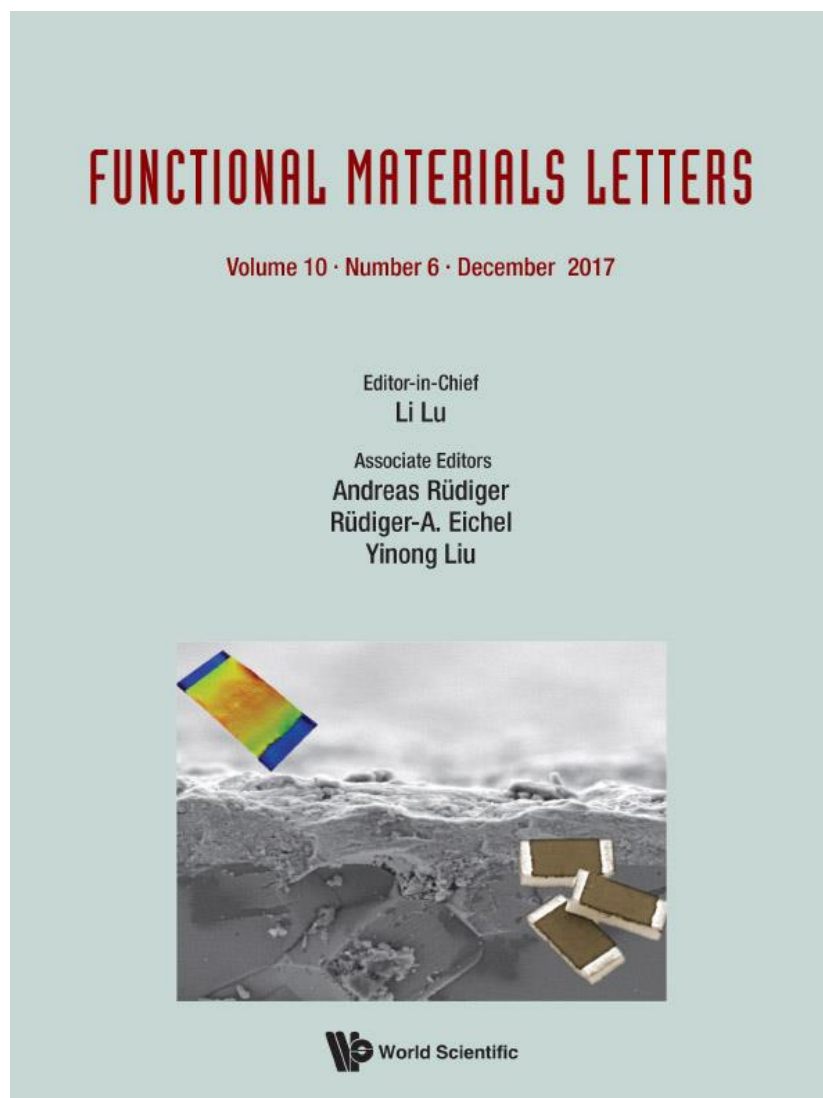


## Cover Letter in Functional Materials Letters

M. Schubert, J. Kita, C. Münch, R. Moos:

Analysis of the characteristics of thick-film NTC thermistor devices manufactured by screen-printing and firing technique and by room temperature aerosol deposition method (ADM)

*Functional Materials Letters*, **10**, 1750073 (2017), doi: 10.1142/S1793604717500734



The study compares thick-film NTC thermistor devices, produced by the screen-printing (and firing) technique and by the Aerosol Deposition Method (ADM) at room temperature. The devices are compared with respect to film quality (optical, mechanical) and to the negative temperature coefficient of resistance (NTCR) parameters  $\rho_{25}$  and  $B$ . While the screen-printed films are porous, the Aerosol Deposited (AD) films are characterized by high tightness, mechanical stability, and a production at room temperature. The electrical analysis shows that the AD films reach the  $\rho_{25}$ - and  $B$ -values of bulk NTCs from literature after a moderate tempering step below 400°C in air. The screen-printed films show  $B$ -values that are comparable to the values of bulk NTCs from literature and  $\rho_{25}$ -values that are significantly higher.