

Supplementary materials

Transition between Friction Modes in Adhesive Contacts of a Hard Indenter and a Soft Elastomer: An Experiment

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Figure S1 Dependencies similar to Figure 8 in the article but obtained for an indenter with a radius $R = 50$ mm.

Figure S2 Dependencies similar to Figure 9 in the article but obtained for an indenter with a radius $R = 50$ mm.

Figure S3 Dependencies similar to Figure 3b in the article but obtained for an indenter with a radius $R = 50$ mm.

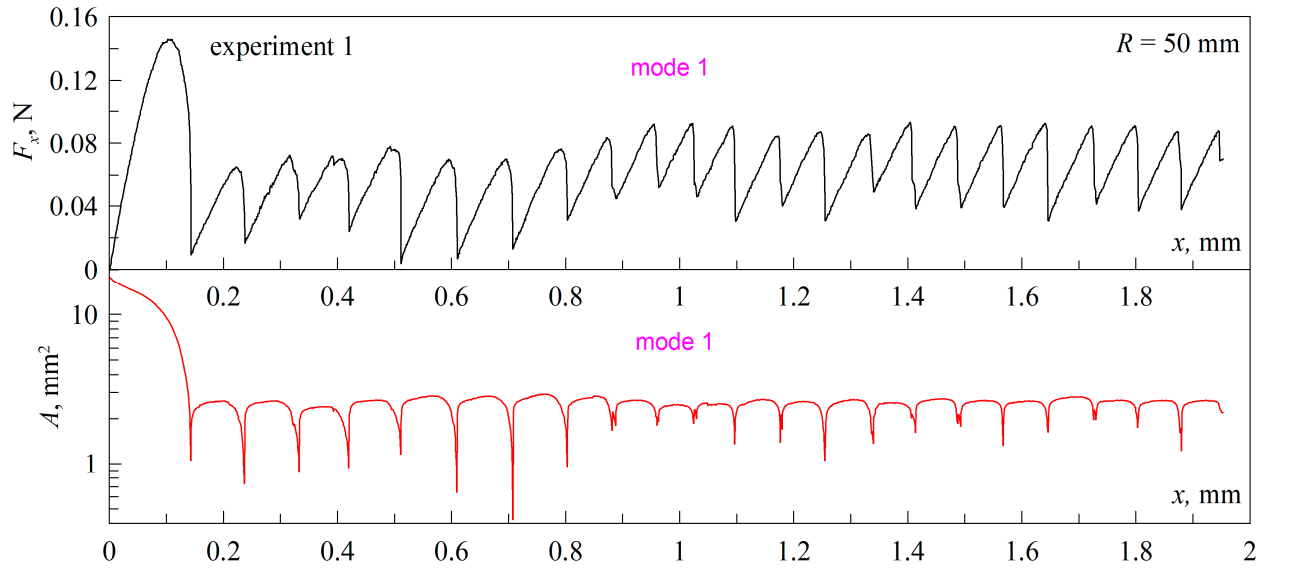


Figure S1. Dependencies of a tangential force F_x (top panel) and contact area A (bottom panel) on tangential shift of the indenter x in the first experiment with the indenter with a radius $R = 50$ mm. Supplementary Video S6 is also available (presented data are similar to dependencies obtained with indenter $R = 40$ mm that are shown in Figure 8 in the main article).

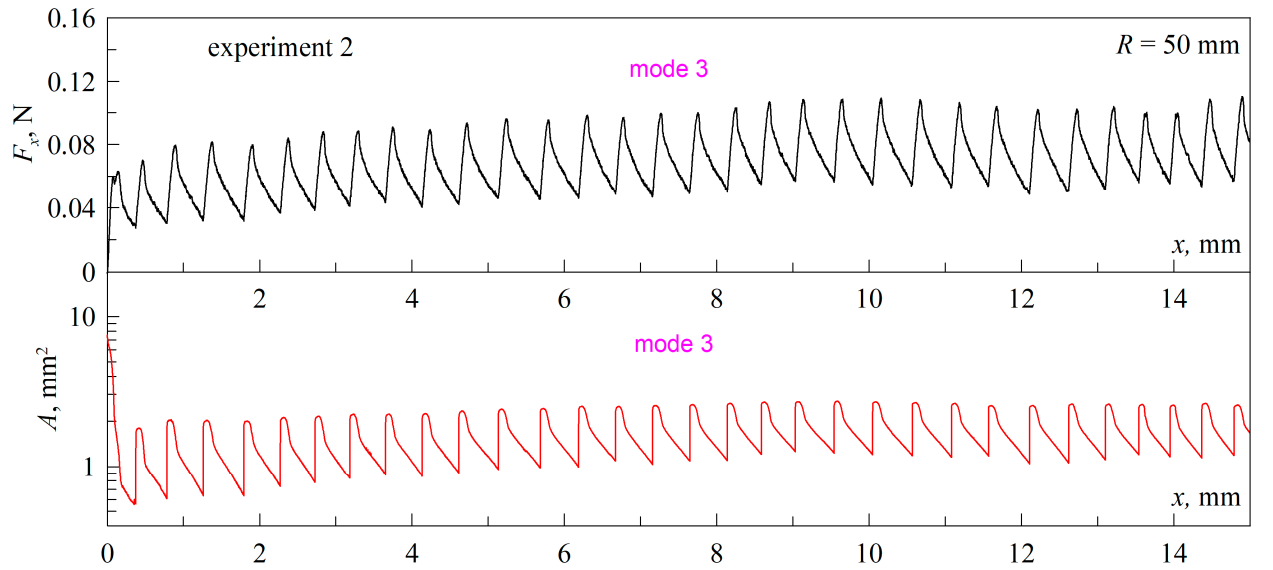


Figure S2. Dependencies of a tangential force F_x (top panel) and contact area A (bottom panel) on tangential shift of the indenter x in second experiment with the indenter with a radius $R = 50$ mm. Supplementary Video S7 is also available (presented data are similar to dependencies obtained with indenter $R = 40$ mm that are shown in Figure 9 in the main article).

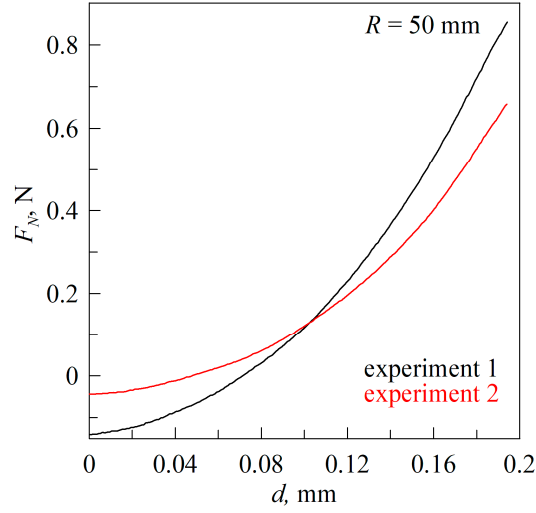


Figure S3. Dependencies of the normal force F_N on indentation depth d in first and second experiments with an indenter with a radius $R = 50$ mm. Supplementary Videos S6 and S7 are also available (presented data are similar to dependencies obtained with indenter $R = 40$ mm that are shown in Figure 3b in the main article).

Important note: In Figure S3, different values of the normal force F_N correspond to the maximum indentation depth $d \approx 0.2$ mm. However, in the indentation phase, the normal forces should be the same, as is correctly shown by the results for the other two indenters depicted in Figure 3a,b in the main body of the paper. Such a discrepancy in this case is the result of incorrect determination of the indentation depth d in the experiment, the results of which are shown in this supplementary material. This problem in the indentation phase was only observed in the experiment with indenter $R = 50$ mm. However, this discrepancy does not affect the main results because no problems were observed in the tangential shear mode (see Figure S1 and Figure S2). Moreover, despite the issue described above, Figure S3 clearly demonstrates a decrease in the adhesive strength of the contact in the second experiment compared to the first one. Therefore, we did not perform another experiment with an indenter with a radius $R = 50$ mm and decided to show the existing results to confirm the conclusions presented in the main text of the paper.