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As an electrical engineer I'm really interested in development of new materials. Previously I've been working in area of automation and maintenance in industry and a technical support engineer for renemated OEM company. New materials with development in AI and nanotechnology will bring a big leap forward in the technology and change our way of thinking about contemporary issues such as environmental pollution.

Abstract:

with great enthusiasm, I would like to submit the overview of the topic I would like to share with participants in the conference.
As we know, things break we need to repair them. This is the source of additional expenses as a halt period, spare parts, cause of other things in the system to breakdown.
Self-healing polymeric materials are the new kind of smart materials design to mitigated and prevent these problems. The application for these kind of materials is immense and scientists are developing most efficient solutions.
Technology development brought us self-healing materials which can be used doe insulators, cracked mobile phone screens, paint on vehicles or faults with machinery in toxic zones. Consequently, progress could lead us to self-repairing robots, which would ultimately improve efficiency of the machines.
In my presentation, I would like to show where we stand with self-healing materials production and point out the problems. Furtheron, we'll explore which industries lead the way and potential applications. Discussion could go in the direction of opening new areas and combination with other smart materials and AI.

Publications:

1. Ying, H.; Zhang, Y.; Cheng, J. (2014). "Dynamic urea bond for the design of reversible and self-healing polymers"
2. Speck, O.; Luchsinger, R.; Rampf, M.; Speck, T. (2014). "Selbstreparatur in Natur und Technik. – Konstruktion
3. "First international conference on self-healing materials". Delft University of Technology. 12 April 2007.
4. Bauer, G., Speck, T. (2012). "Restoration of tensile strength in bark samples of Ficus benjamina due to coagulation of latex during fast self-healing of fissures
5. Ankush Sharma - Self healing materials: http://home.iitk.ac.in/~apsharma/presentation.pdf