	thermo	electro	magneto	light	chemo	bio	pH	hygro
Piezoceramics	[181]	[71, 172, 47, 58, 69, 156, 1, 102, 14]	[86, 56, 105, 167]					[107, 188]
Electrostrictive materials		[26, 123, 84]						
Magnetostrictive materials	[5, 23, 200]		[26, 151]					
Dielectric Elastomer Actuators (DEAs)	[85]	[4, 62, 44, 80, 127]						
Ionic Polymer Metal Composites (IPMCs)	[76, 113, 15, 185, 16]	[130, 2, 175, 138, 148, 149, 90, 75]	[19]					[15, 185, 16]
Hydrogels/ polymer gels (HGs)	[36, 192, 83, 32]	[98, 54, 8, 9]	[92, 201, 152, 141, 170]	[120, 101, 198, 164, 82, 174, 161]	[98, 38, 99]	[139, 65, 137, 132, 81, 129, 37, 128, 131, 49]	[194, 89, 160, 199, 87, 118, 121]	[12, 115, 116, 168]
Conductive Polymers (CPs)		[135, 134, 61, 10, 119, 155]						
Shape Memory Alloys (SMAs)	[184, 157, 166, 74, 147, 162]		[39]	[64]				
Shape Memory Polymers (SMPs)	[114, 73, 183]							[176, 24]
Piezoelectric polymers	[108]							
Metal Organic Frameworks					[88]			[100]
Liquid-crystalline networks	[144, 169, 187]	[97, 68]	[41]	[112, 28, 93, 195]			[25]	[67, 25]
Carbon Nanotube yarn		[104]		[104]	[104]			

Table 1: Different classes of active materials; base version according to Ref. [**?**].

	(0) actuator	(i) sens-act	(ii) connection	(iii) obstruction	(iv) structural	(v) conductivities	(vi) logic
Piezoceramics	[47, 58, 71]	[172, 154]			[146, 178, 177]	[171, 51]	
Electrostrictive materials	[26, 27, 66, 94]						[84]
Magnetostrictive materials	[48, 30, 53]	[79]			[151]		
Hydrogels/polymer gels	[136, 198, 50, 77]	[186, 117, 65, 43, 143, 173, 17]	[40, 145, 31, 33]	[36, 3, 6, 142, 199]	[109, 35, 153]	[70, 103, 22, 12, 72]	[55, 21, 42]
Dielectric Elastomer Actuators	[4, 44, 62, 110, 159]	[179]		[52]	[96, 124, 7, 63]	[133, 20, 150]	[62, 57]
Ionic Polymer Metal Composites	[130, 193, 78]	[182, 140]		[197]	[111, 196]	[95]	[180]
Conductive Polymers	[10, 119, 155, 135, 29, 190]						
Shape Memory Alloys	[157, 13, 91]	[45]		[126]	[122, 59, 18]	[60, 163, 165]	
Shape Memory Polymers	[11, 191, 158]				[106, 46, 125]	[183, 189]	

Table 2: Application examples of the active materials from Table 1 as actuators or for secondary applications from the groups according to [34]. The concepts are from left to right: (0) Actuator, (i) sensor-actuator, (ii) connection/breaking, (iii) obstruction, (iv) change of structural/surface interactions, (v) change of conductivity, (vi) material logic.

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