

DNA_sequence_ST25
SEQUENCE LISTING

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<120> Composite material comprising DNA hydrogel and silica nanoparticles

<130> K 6453W0

<150> EP 18181821.2
<151> 2018-07-05

<160> 17

<170> PatentIn version 3.5

<210> 1
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<220>

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<221> amino-modified

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DNA_sequence_ST25

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<220>

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<220>
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DNA_sequence_ST25

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| cgagcaaaat ttaagctaca acaaggcaag gcttgaccga caattgcatg aagaatctgc | 180 |
| ttagggttag gcgttttgcg ctgcttcgcg atgtacgggc cagatatacg cgttgacatt | 240 |
| gattattgac tagttattaa tagtaatcaa ttacgggggtc attagttcat agcccatata | 300 |
| tggagttccg cgttacataa cttacggtaa atggcccgcc tggctgaccg cccaacgacc | 360 |
| cccgcccatt gacgtcaata atgacgtatg ttcccatagt aacgccaata gggactttcc | 420 |
| attgacgtca atgggtggag tatttacggg aaactgcccc cttggcagta catcaagtgt | 480 |
| atcatatgcc aagtacgccc cctattgacg tcaatacggg aaatggcccg cctggcatta | 540 |
| tgcccagtac atgaccttat gggactttcc tacttggcag tacatctacg tattagtcac | 600 |
| cgctattacc atgggtgatgc gggttttgga gtacatcaat gggcgtggat agcggtttga | 660 |
| ctcacgggga tttccaagtc tccaccccat tgacgtcaat gggagtttgt tttggcacca | 720 |
| aatcacggg actttccaaa atgtcgtaac aactccgccc cattgacgca aatgggcggt | 780 |
| aggcgtgtac ggtgggaggt ctatataagc agagctctct ggctaactag agaaccact | 840 |
| gcttactggc ttatcgaaat taatacgact cactataggg agaccaagc tggctagtta | 900 |
| agctatcaac aagtttgtag aaaaagcagg ctctaaggag gatagaacca tgggtgtctaa | 960 |
| gggcgaagag ctgattaagg agaacatgca catgaagctg tacatggagg gcaccgtgaa | 1020 |
| caaccaccac ttcaagtga catccgaggg cgaaggcaag ccctacgagg gcaccagac | 1080 |
| catgagaatc aagtggtcg agggcggccc tctccccttc gccttcgaca tcctggctac | 1140 |
| cagcttcatg tacggcagca aaaccttcat caaccacacc caggcatccc cgacttcttt | 1200 |
| aagcagtcct tccctgaggg cttcacatgg gagagagtca ccacatacga agacgggggc | 1260 |
| gtgctgaccg ctacccagga caccagctc caggacggct gcctctctac aacgtcaaga | 1320 |
| tcagaggggt gaacttccca tccaacggcc ctgtgatgca gaagaaaaca ctcggctggg | 1380 |
| aggcctccac cgagatgctg taccgctg acggcggcct ggaaggcaga agcgacatgg | 1440 |

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| ccctgaagct cgtgggcggg ggccacctga tctgcaactt gaagaccaca tacagatcca | 1500 |
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| gaatcaagga ggccgacaaa gagacctacg tcgagcagca cgagggtggct gtggccagat | 1620 |
| actgcgacct ccctagcaaa ctgggggcaca aacttaatta cccagctttc ttgtacaaag | 1680 |
| tggttgatct agagggcccg cggttcgaag gtaagcctat ccctaaccct ctcctcggtc | 1740 |
| tcgattctac gcgtaccggt catcatcacc atcaccattg agtttaaacc cgctgatcag | 1800 |
| cctcgactgt gccttctagt tgccagccat ctgttgtttg cccctcccc gtgccttcct | 1860 |
| tgaccctgga aggtgccact cccactgtcc ttcctaataa aatgaggaaa ttgcatcgca | 1920 |
| ttgtctgagt aggtgtcatt ctattctggg ggggtggggtg gggcaggaca gcaaggggga | 1980 |
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| ttggttaaaa aatgagctga ttttaacaaa atttaacgcg aattaattct gtggaatgtg | 2520 |
| tgtcagttag ggtgtggaaa gtccccaggc tccccagcag gcagaagtat gcaaagcatg | 2580 |
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| ggttctccgg ccgcttgggt ggagaggcta ttcggctatg actgggcaca acagacaatc | 3000 |

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| aagaccgacc tgtccggtgc cctgaatgaa ctgcaggacg aggcagcgcg gctatcgtgg | 3120 |
| ctggccacga cgggcgttcc ttgctgcagct gtgctcgacg ttgtcactga agcgggaagg | 3180 |
| gactggctgc tattgggcga agtgccgggg caggatctcc tgtcatctca ctttgctcct | 3240 |
| gccgagaaaag tatccatcat ggctgatgca atgcggcggc tgcatacgct tgatccggct | 3300 |
| acctgccccat tcgaccacca agcgaacat cgcacgcagc gagcacgtac tcggatggaa | 3360 |
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| gccgccttct atgaaagggt gggcttcgga atcgttttcc gggacgccgg ctggatgac | 3840 |
| ctccagcgcg gggatctcat gctggagttc ttcgccacc ccaacttggt tattgcagct | 3900 |
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| tcgacctcta gctagagctt ggcgtaatca tggcatagc tgtttcctgt gtgaaattgt | 4080 |
| tatccgctca caattccaca caacatacga gccggaagca taaagtgtaa agcctggggg | 4140 |
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| aacgcaggaa agaacatgtg agcaaaaggc cagcaaaagg ccaggaaccg taaaaaggcc | 4440 |
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| taggtcgttc gtcceaagct gggctgtgtg cacgaacccc ccgttcagcc cgaccgctgc | 4740 |
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| ctgaagccag ttaccttcgg aaaaagagtt ggtagctctt gatccggcaa acaaaccacc | 4980 |
| gctggtagcg gtgggttttt tgtttgcaag cagcagatta cgcgcagaaa aaaaggatct | 5040 |
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| taagggattt tggatcatgag attatcaaaa aggatcttca cctagatcct tttaaattaa | 5160 |
| aaatgaagtt ttaaataaat ctaaagtata tatgagtaaa cttgggtctga cagttaccaa | 5220 |
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| gcaatgatac cgcgagaccc acgctcaccg gctccagatt tatcagcaat aaaccagcca | 5400 |
| gccggaaggg ccgagcgag aagtgggtcct gcaactttat ccgcctccat ccagtctatt | 5460 |
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| ggtgagtact caaccaagtc attctgagaa tagtgtatgc ggcgaccgag ttgctcttgc | 5820 |
| ccggcgtcaa tacgggataa taccgcgcca catagcagaa ctttaaaagt gtcatacatt | 5880 |
| ggaaaacgtt cttcggggcg aaaactctca aggatcttac cgctgttgag atccagttcg | 5940 |
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| gggtgagcaa aaacaggaag gcaaaatgcc gcaaaaaagg gaataagggc gacacggaaa | 6060 |
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DNA_sequence_ST25

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DNA_sequence_ST25

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| ggattttgcc gatttcggcc tattgggttaa aaaatgagct gatttaacaa aaatttaacg | 540 |
| cgaattttta caaaatatta acgtttacaa tttcaggtgg cacttttcgg ggaaatgtgc | 600 |
| gcggaacccc tatttgttta tttttctaaa tacattcaaa tatgtatccg ctcatgagac | 660 |
| aataaccctg ataaatgctt caataatatt gaaaaaggaa gagtatgagt attcaacatt | 720 |
| tccgtgtcgc ctttattccc ttttttgcgg cattttgcct tcctgttttt gctcaccag | 780 |
| aaacgctggg gaaagtaaaa gatgctgaag atcagttggg tgcacgagtg ggttacatcg | 840 |
| aactggatct caacagcggg aagatccttg agagttttcg cccgaagaa cgttttccaa | 900 |
| tgatgagcac ttttaaagtt ctgctatgtg gcgcgggtatt atcccgtatt gacgccgggc | 960 |
| aagagcaact cggtcgccgc atacactatt ctcagaatga cttggttgag tactcaccag | 1020 |
| tcacagaaaa gcatcttacg gatggcatga cagtaagaga attatgcagt gctgccataa | 1080 |
| ccatgagtga taacactgcg gccaaacttac ttctgacaac gatcggagga ccgaaggagc | 1140 |
| taaccgcttt ttgcacaac atgggggatc atgtaactcg ccttgatcgt tgggaaccgg | 1200 |
| agctgaatga agccatacca aacgacgagc gtgacaccac gatgcctgca gcaatggcaa | 1260 |
| caacgttgcg caaactatta actggcgaac tacttactct agcttcccgg caacaattaa | 1320 |
| tagactggat ggaggcggat aaagttgcag gaccacttct gcgctcggcc cttccggctg | 1380 |
| gctggtttat tgctgataaa tctggagccg gtgagcgtgg gtctcgcggg atcattgcag | 1440 |
| cactggggcc agatggtaag ccctcccgta tcgtagttat ctacacgacg gggagtcagg | 1500 |
| caactatgga tgaacgaaat agacagatcg ctgagatagg tgcctcactg attaagcatt | 1560 |
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| tggtttgttt gccggatcaa gagctaccaa ctctttttcc gaaggtaact ggcttcagca | 1860 |
| gagcgcagat accaaaatact gtccttctag tgtagccgta gttaggccac cacttcaaga | 1920 |
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| | |
|---|------|
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| agcggtcggg ctgaacgggg ggttcgtgca cacagcccag cttggagcga acgacctaca | 2100 |
| ccgaactgag atacctacag cgtgagctat gagaaagcgc cacgcttccc gaaggagaa | 2160 |
| aggcggacag gtatccggta agcggcaggg tcggaacagg agagcgcacg aggagcttc | 2220 |
| cagggggaaa cgcctggtat ctttatagtc ctgtcgggtt tcgccacctc tgacttgagc | 2280 |
| gtcgattttt gtgatgctcg tcaggggggc ggagcctatg gaaaaacgcc agcaacgcgg | 2340 |
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| cccctgattc tgtggataac cgtattaccg ctttgagtg agctgatacc gctcgccgca | 2460 |
| gccgaacgac cgagcgcagc gagtcagtga gcgaggaagc ggaagagcgc ctgatgcggt | 2520 |
| attttctcct tacgcatctg tgcggtatth cacaccgcat atatggtgca ctctcagtac | 2580 |
| aatctgctct gatgccgcat agttaagcca gtatacactc cgctatcgct acgtgactgg | 2640 |
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| ttttcaccgt catcaccgaa acgcgcgagg cagctgcggt aaagctcatc agcgtggctc | 2820 |
| tgaagcgatt cacagatgtc tgcctgttca tccgcgtcca gctcgttgag tttctccaga | 2880 |
| agcgttaatg tctggcttct gataaagcgg gccatgttaa gggcggtttt ttcctgtttg | 2940 |
| gtcactgatg cctccgtgta agggggattt ctgttcatgg gggtaatgat accgatgaaa | 3000 |
| cgagagagga tgctcacgat acgggttact gatgatgaac atgcccgggt actggaacgt | 3060 |
| tgtgagggta aacaactggc ggtatggatg cggcgggacc agagaaaaat cactcagggt | 3120 |
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| gaaacacgga aaccgaagac cattcatgtt gttgctcagg tcgcagacgt tttgcagcag | 3300 |
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DNA_sequence_ST25

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| cggaaggagc tgactggggtt gaaggctctc aagggcatcg gtcgagatcc cgggtgcctaa | 3720 |
| tgagtgagct aacttacatt aattgcgttg cgctcactgc ccgctttcca gtcgggaaac | 3780 |
| ctgtcgtgcc agctgcatta atgaatcggc caacgcgcgg ggagaggcgg tttgcgtatt | 3840 |
| gggcgccagg gtgggtttttc ttttcaccag tgagacgggc aacagctgat tgcccttcac | 3900 |
| cgcctggccc tgagagagtt gcagcaagcg gtccacgctg gtttgcccca gcaggcgaaa | 3960 |
| atcctgtttg atgggtggta acggcgggat ataacatgag ctgtcttcgg tatcgtcgta | 4020 |
| tcccactacc gagatatccg caccaacgcg cagcccggac tcggtaatgg cgcgcatcgc | 4080 |
| gcccagcgcc atctgatcgt tggcaaccag catcgcatg ggaacgatgc cctcattcag | 4140 |
| catttgcatg gtttgttgaa aaccggacat ggcactccag tcgcctttcc gttccgctat | 4200 |
| cggctgaatt tgattgcgag tgagatattt atgccagcca gccagacgca gacgcgccga | 4260 |
| gacagaactt aatgggcccc ctaacagcgc gatttgctgg tgaccaatg cgaccagatg | 4320 |
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| atcctgggtca tccagcggat agttaatgat cagcccactg acgcgttgcg cgagaagatt | 4500 |
| gtgcaccgcc gctttacagg cttcgacgcc gtttcgttct accatcgaca ccaccacgt | 4560 |
| ggcaccacgt tgatcggcgc gagatttaat cgccgcgaca atttgcgacg gcgcgtgcag | 4620 |
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| ctcgacgctc tcccttatgc gactcctgca ttaggaagca gccagtagt aggttgaggc | 4980 |
| cgttgagcac cgccgccgca aggaatgggt catgcaagga gatggcgccc aacagtcccc | 5040 |
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DNA_sequence_ST25

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| tttgtttaac ttttaagaagg agatatacat ggcacatatt gttatggttg atgcctataa | 5340 |
| accgaccaa ggtggtggtg gcagcgttag caaagggtgaa gaactgttta ccggtgttgt | 5400 |
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| tgaaaaacgt gatcacatgg tgctgctgga atttgttacc gcagcaggta ttaccctggg | 6060 |
| tatggatgaa ctgtataaac atcatcacca ccatcattaa gatccggctg ctaacaaagc | 6120 |
| ccgaaaggaa | 6130 |