

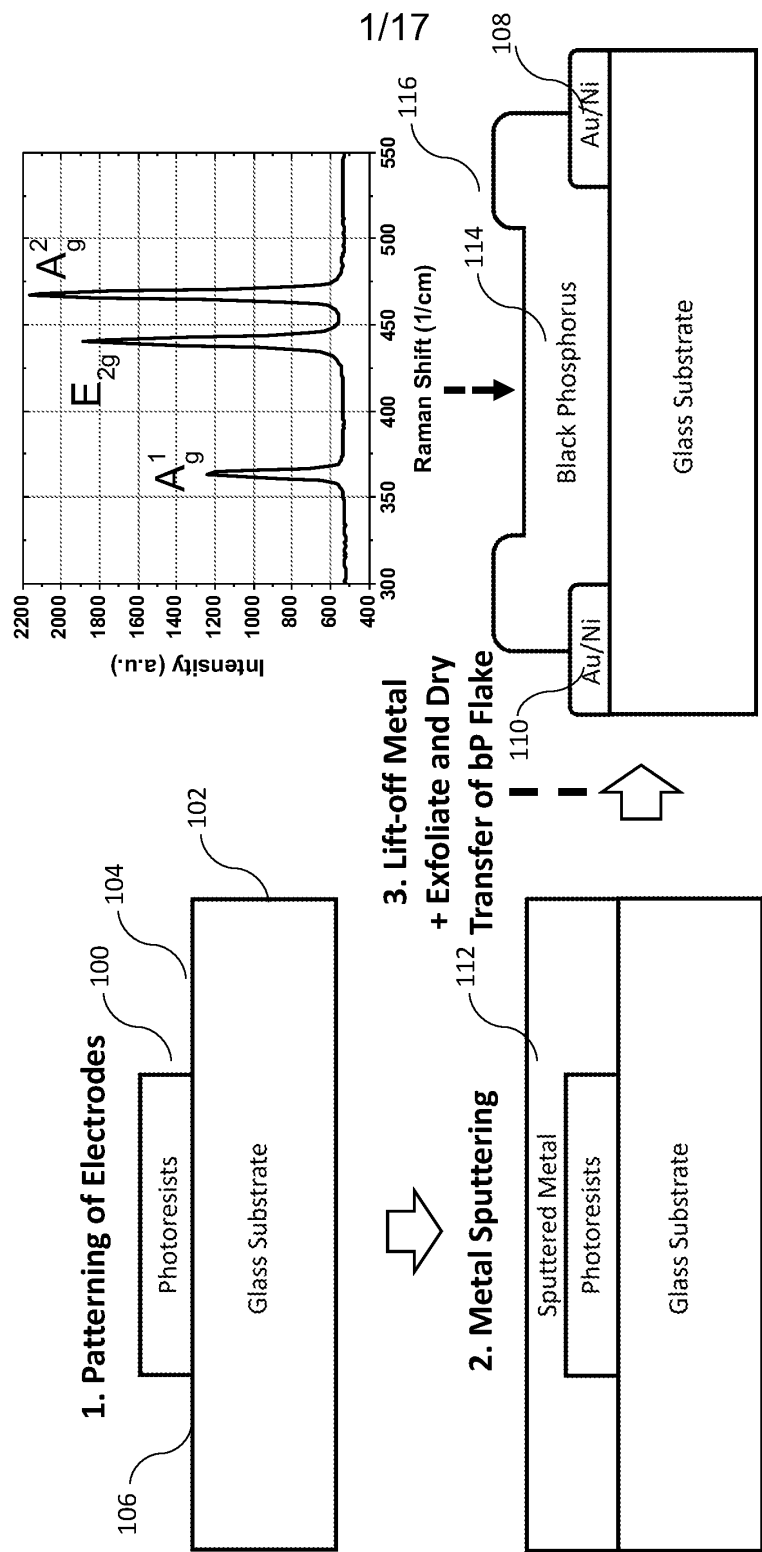


Figure 1

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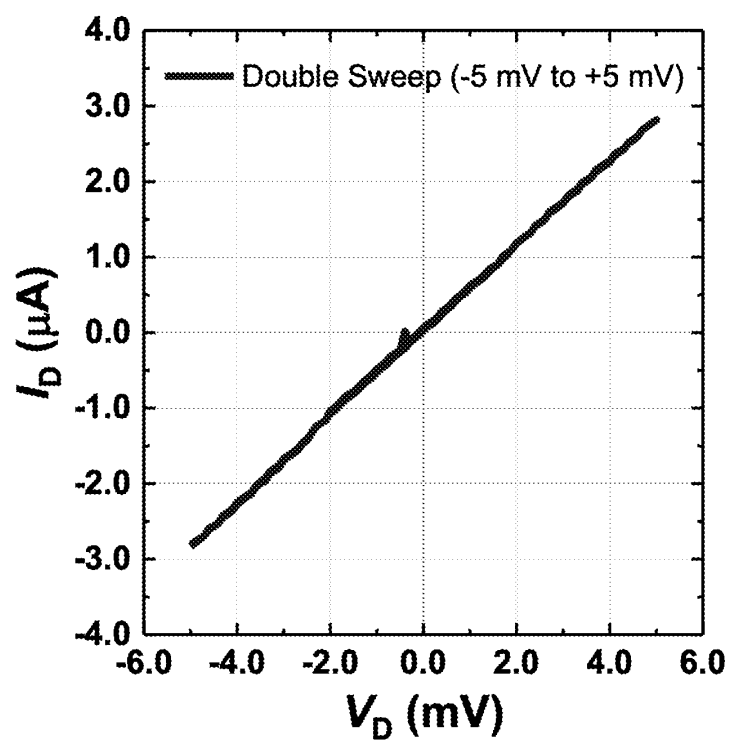


Figure 2

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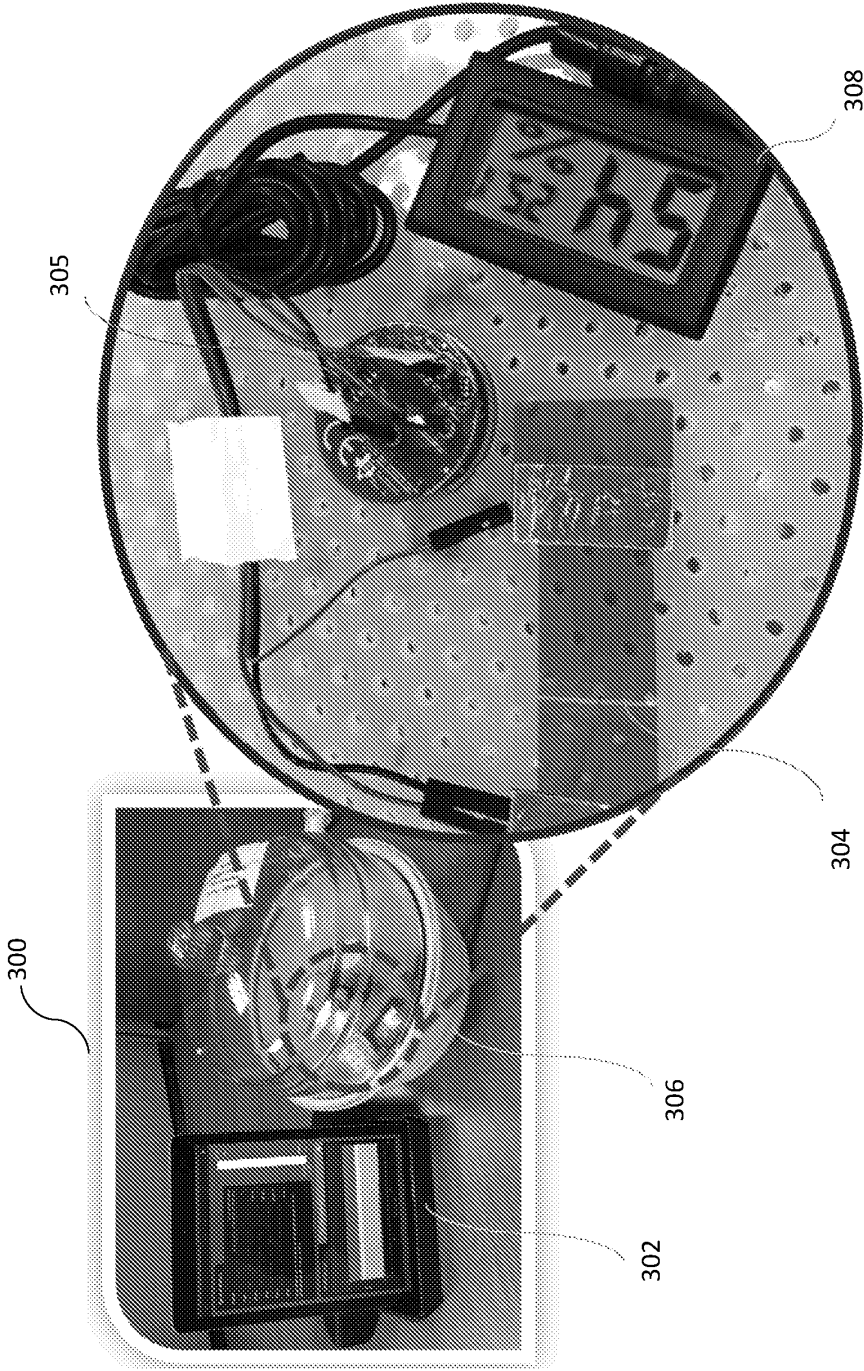


Figure 3

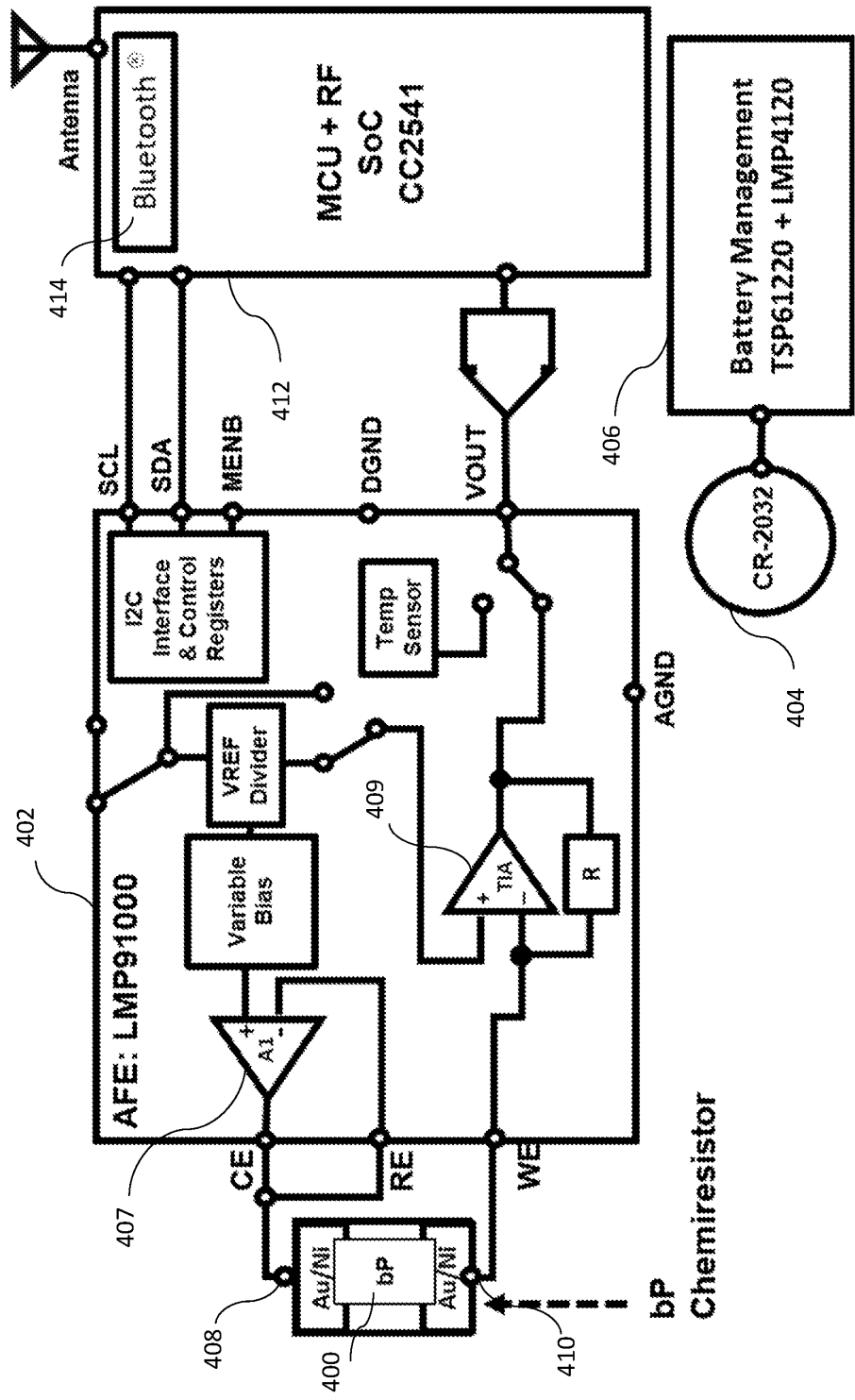


Figure 4

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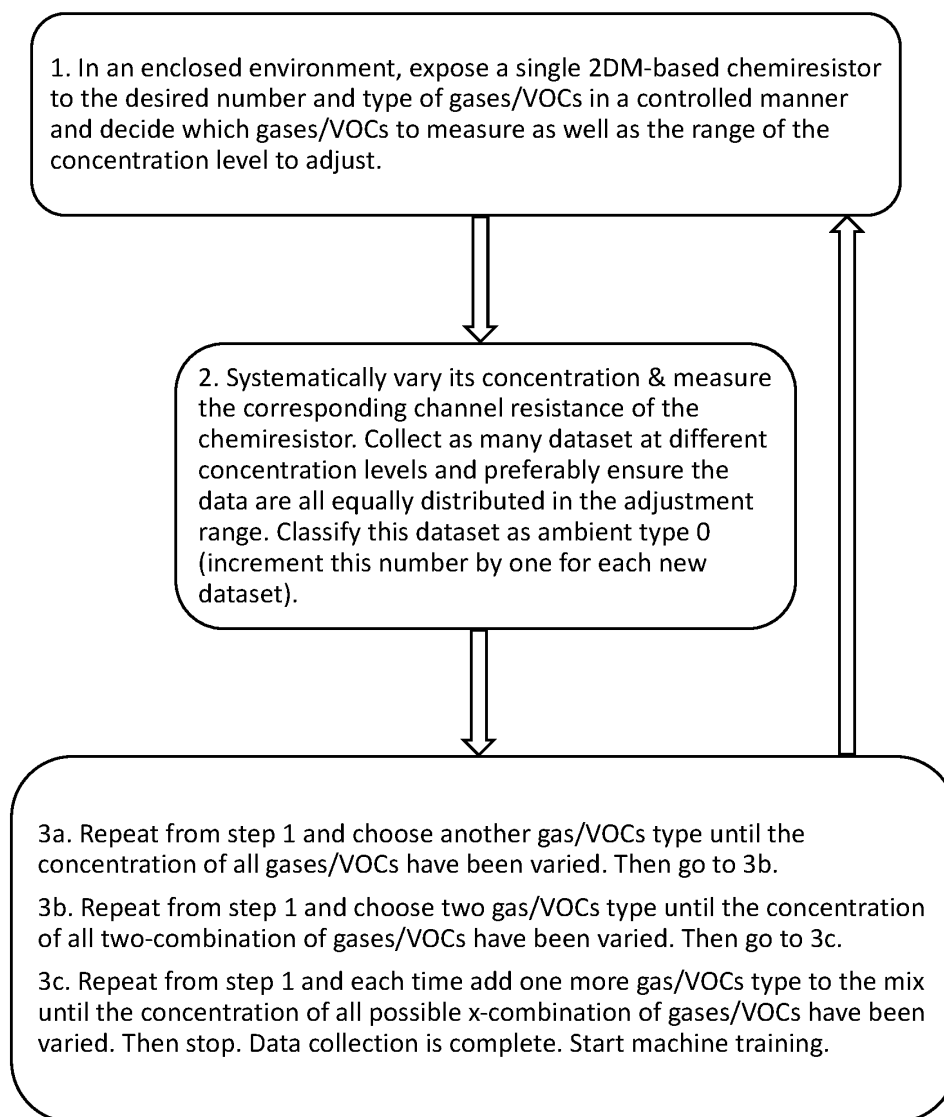


Figure 5

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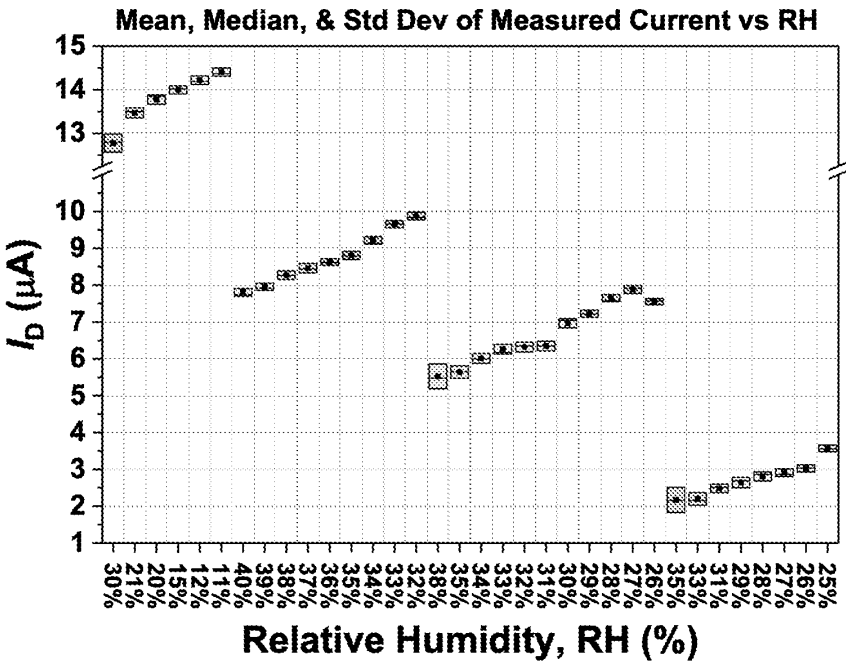


Figure 6

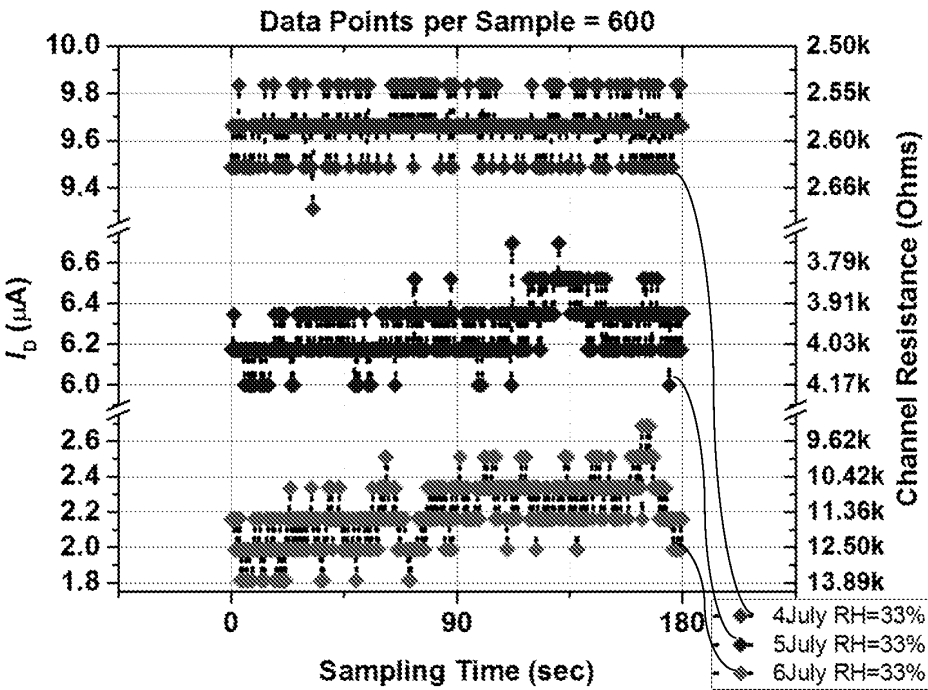


Figure 7

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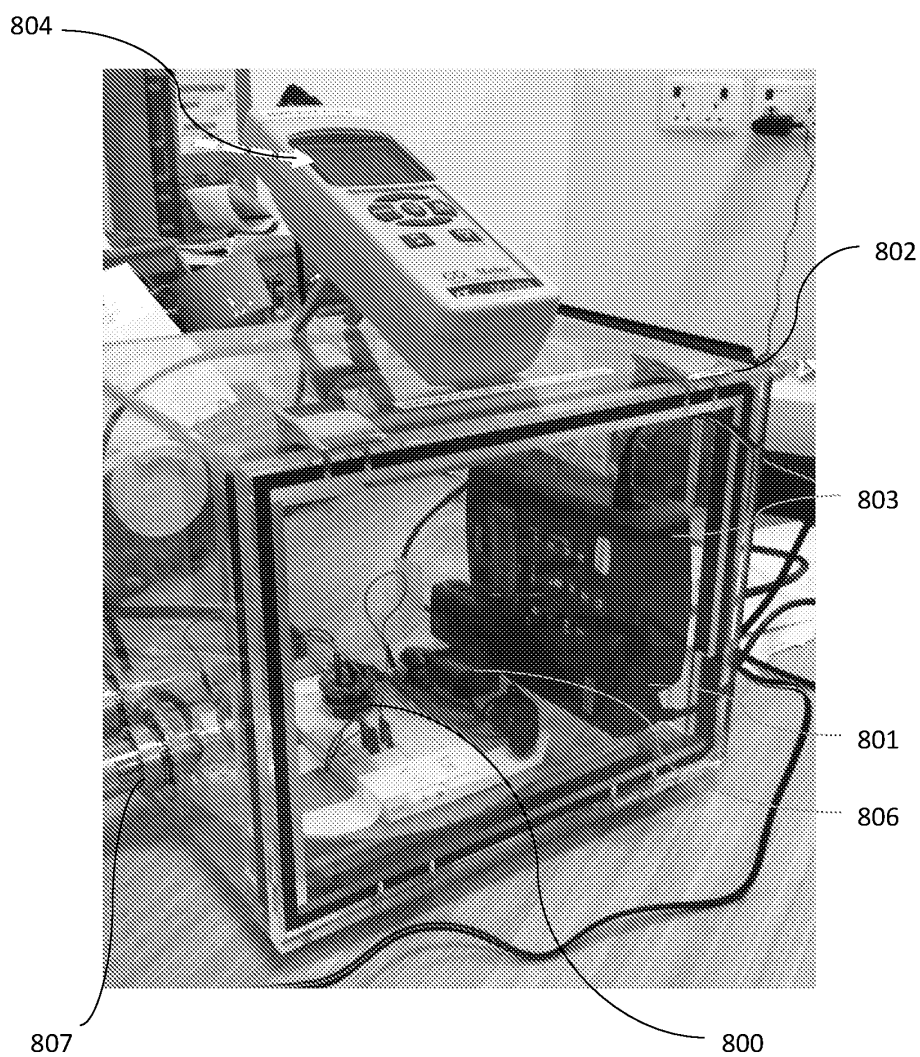


Figure 8

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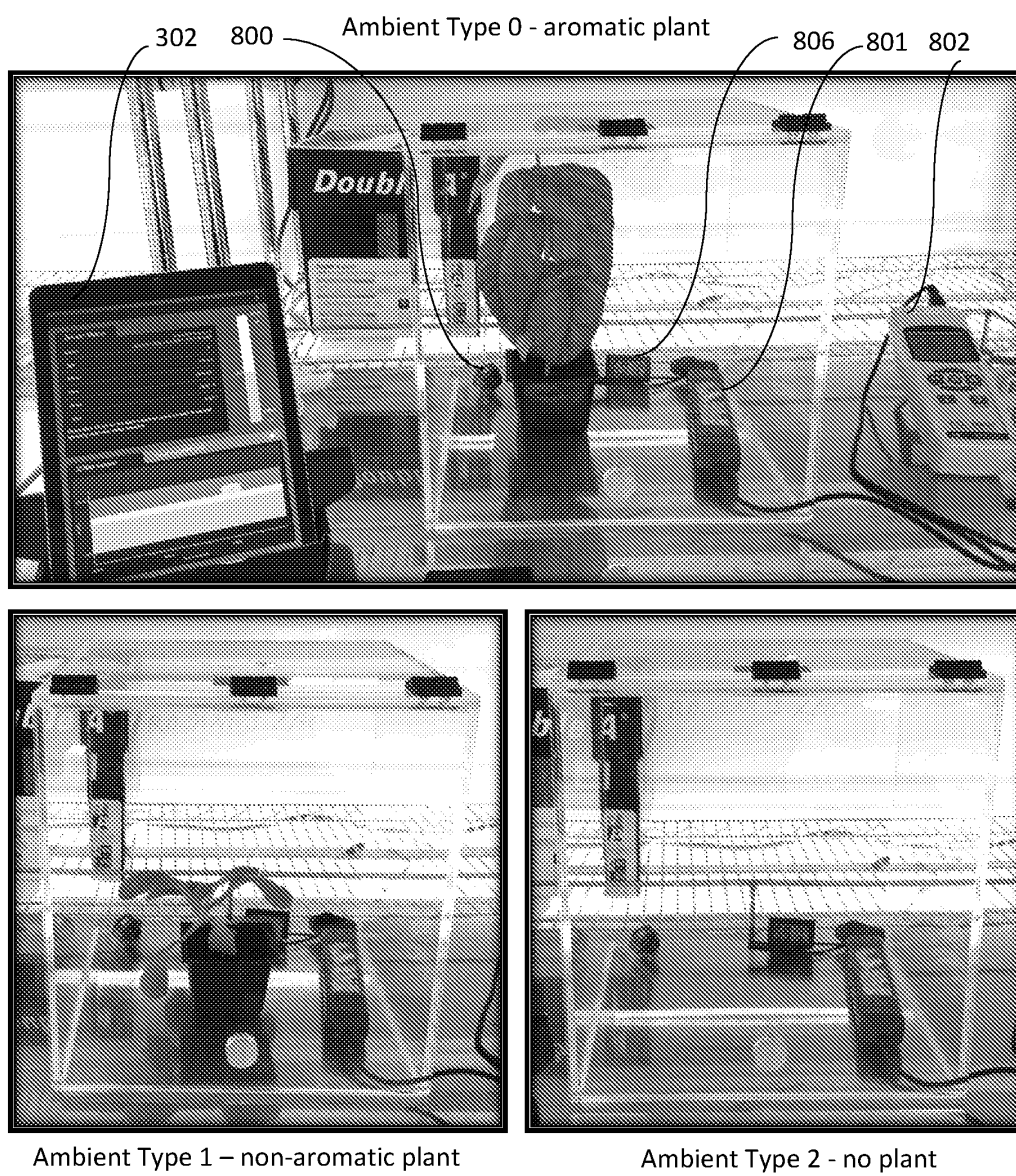


Figure 9

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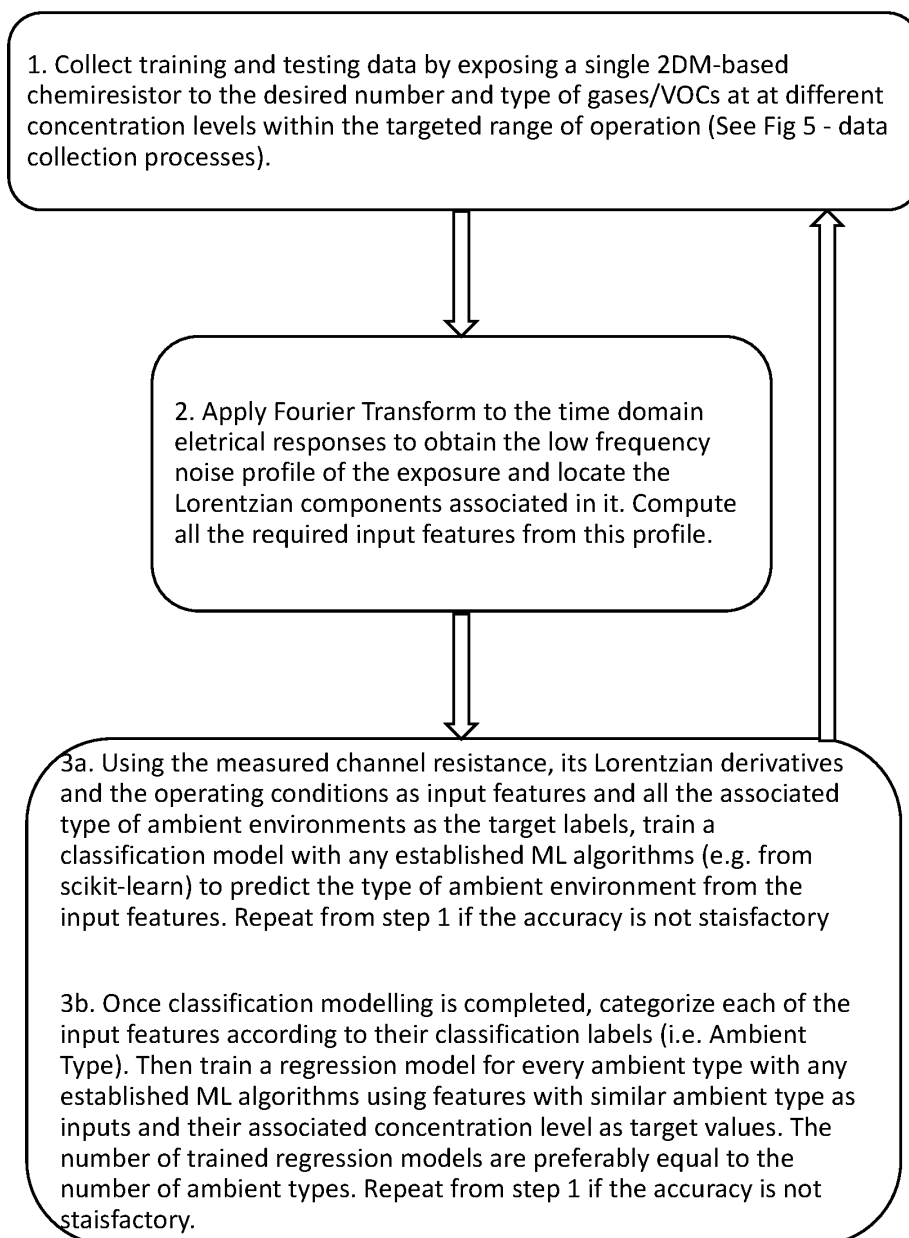


Figure 10

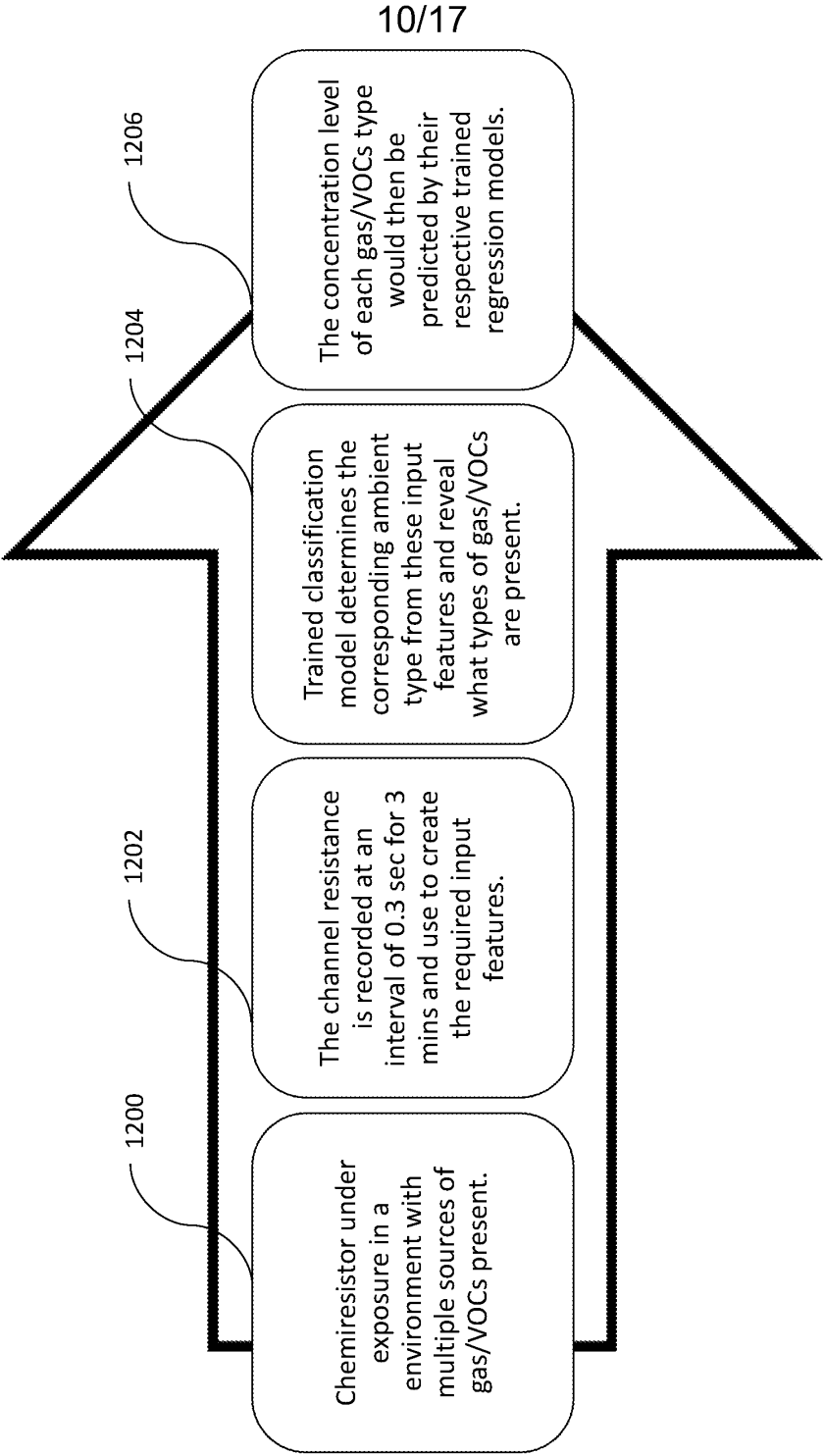


Figure 11

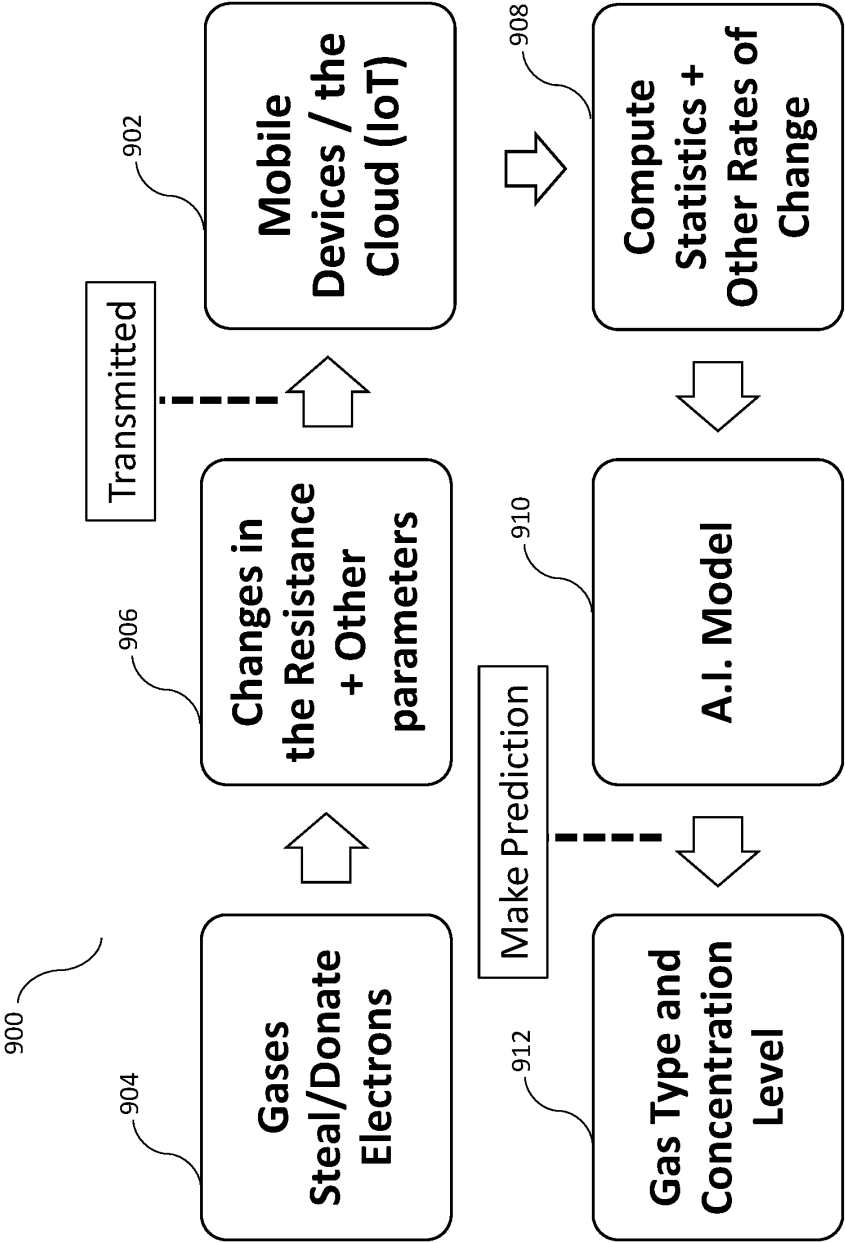


Figure 12

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| <i>RchSignatureFreq(Hz)</i><br><i>Ambient0=RH &amp; CO2 Variations.</i> |          | <i>RchSignatureFreq(Hz)</i><br><i>Ambient1=CO2 Variations.</i> |          | <i>RchSignatureFreq(Hz)</i><br><i>Ambient2=CO2 &amp; N2O Variations.</i> |          |
|-------------------------------------------------------------------------|----------|----------------------------------------------------------------|----------|--------------------------------------------------------------------------|----------|
| Mean                                                                    | 1.256806 | Mean                                                           | 1.030305 | Mean                                                                     | 1.175528 |
| Standard Error                                                          | 0.001877 | Standard Error                                                 | 0.002148 | Standard Error                                                           | 0.001619 |
| Median                                                                  | 1.364448 | Median                                                         | 0.978476 | Median                                                                   | 1.134911 |
| Mode                                                                    | 1.13605  | Mode                                                           | 1.134068 | Mode                                                                     | 1.139658 |
| Standard Deviation                                                      | 0.315869 | Standard Deviation                                             | 0.298142 | Standard Deviation                                                       | 0.214697 |
| Sample Variance                                                         | 0.099773 | Sample Variance                                                | 0.088889 | Sample Variance                                                          | 0.046095 |
| Count                                                                   | 28320    | Count                                                          | 19260    | Count                                                                    | 17580    |
| Confidence Level(99.0%)                                                 | 0.004835 | Confidence Level(99.0%)                                        | 0.005534 | Confidence Level(99.0%)                                                  | 0.004171 |

Figure 13

| <i>RchSignatureFreq(Hz)</i><br><i>Ambient0=NoPlant</i> |          | <i>RchSignatureFreq(Hz)</i><br><i>Ambient1=Plant with NoVOCs</i> |          | <i>RchSignatureFreq(Hz)</i><br><i>Ambient2=Plant with VOCs</i> |          |
|--------------------------------------------------------|----------|------------------------------------------------------------------|----------|----------------------------------------------------------------|----------|
| Mean                                                   | 1.122522 | Mean                                                             | 1.152393 | Mean                                                           | 1.372257 |
| Standard Error                                         | 0.017523 | Standard Error                                                   | 0.021347 | Standard Error                                                 | 0.015986 |
| Median                                                 | 1.173207 | Median                                                           | 1.36003  | Median                                                         | 1.610973 |
| Mode                                                   | 1.134736 | Mode                                                             | 0.011001 | Mode                                                           | 1.627169 |
| Standard Deviation                                     | 0.429224 | Standard Deviation                                               | 0.522889 | Standard Deviation                                             | 0.479568 |
| Sample Variance                                        | 0.184233 | Sample Variance                                                  | 0.273413 | Sample Variance                                                | 0.229986 |
| Count                                                  | 600      | Count                                                            | 600      | Count                                                          | 900      |
| Confidence Level(99.0%)                                | 0.045281 | Confidence Level(99.0%)                                          | 0.055162 | Confidence Level(99.0%)                                        | 0.041264 |

Figure 14

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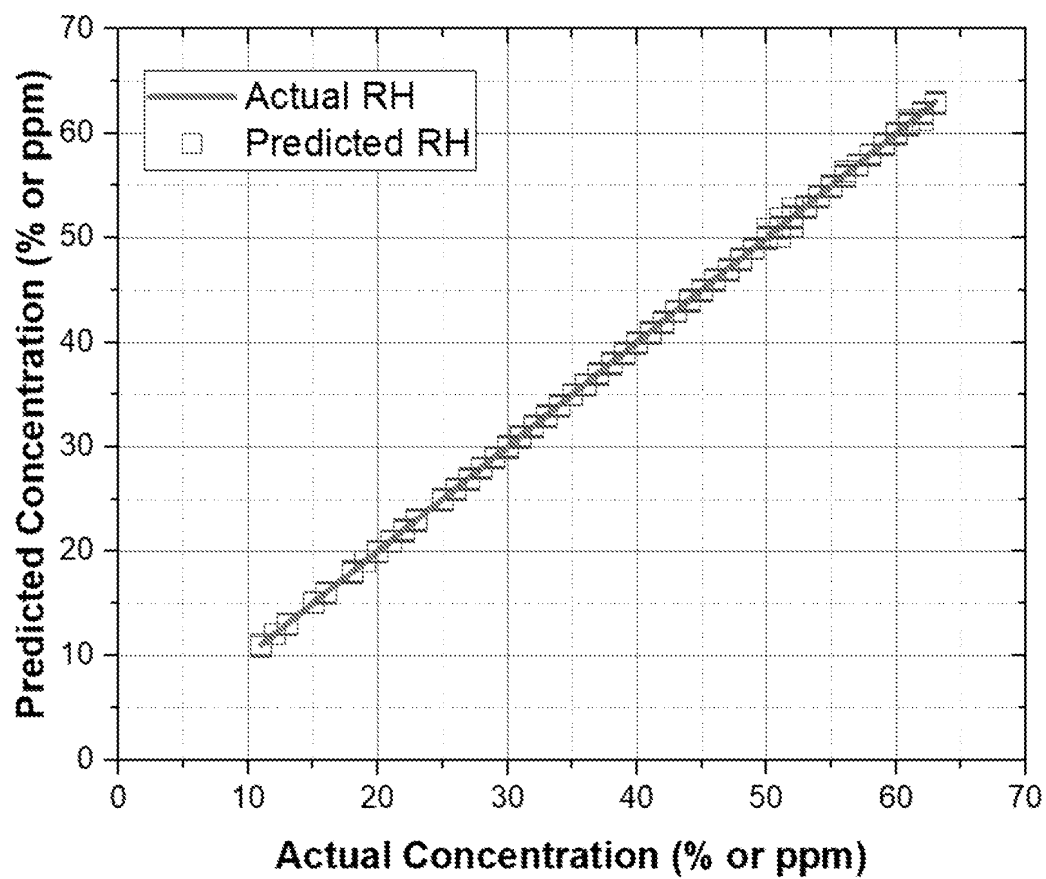


Figure 15

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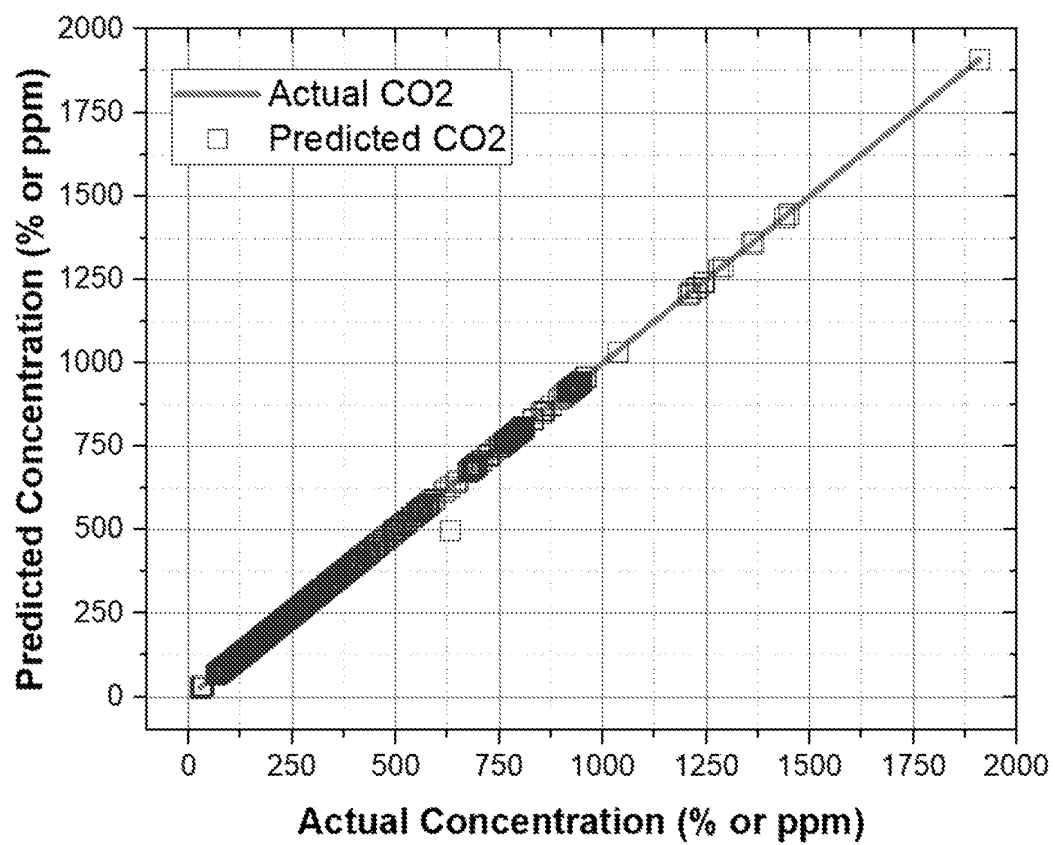


Figure 16

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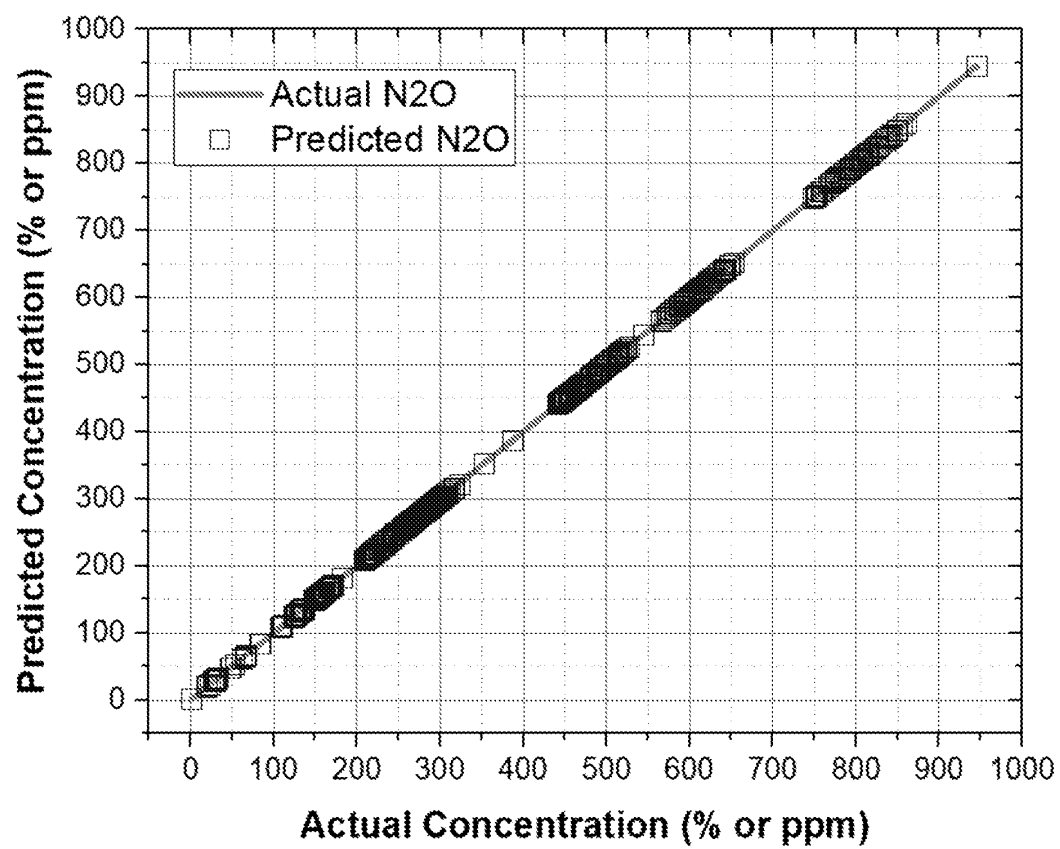


Figure 17

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| Device   | Model     | NumSample | NumFeature | TrainingSize | RMSE | Training Score | Test Score | Prediction Class                                                                          |
|----------|-----------|-----------|------------|--------------|------|----------------|------------|-------------------------------------------------------------------------------------------|
| Dev01-Te | ClassTree | 2100      | 10         | 30           | 0    | 1              | 1          | 0=with No Plants,<br>1= with Non-aromatic Plant,<br>2=with aromatic Plant                 |
| Dev11-bP | ClassTree | 65160     | 10         | 30           | 0    | 0.999242889    | 1          | 0=with RH & CO2 Variations,<br>1= with CO2 Variation Only,<br>2=with CO2 & N2O Variations |

| Device   | Model  | NumSample | NumFeature | TrainingSize | RMSE        | Training Score | Test Score  | Gas Type | Ambient Type |
|----------|--------|-----------|------------|--------------|-------------|----------------|-------------|----------|--------------|
| Dev11-bP | RegSVR | 28320     | 15         | 30           | 0.087848271 | 0.999926767    | 0.999934211 | RH       | 0            |
| Dev11-bP | RegSVR | 19260     | 15         | 30           | 0.101077278 | 0.999999033    | 0.999999541 | CO2      | 1            |
| Dev11-bP | RegSVR | 19260     | 15         | 30           | 0.116932411 | 0.999656973    | 0.999667641 | RH       | 1            |
| Dev11-bP | RegSVR | 17580     | 15         | 30           | 0.201779306 | 0.999996638    | 0.999998615 | CO2      | 2            |
| Dev11-bP | RegSVR | 17580     | 15         | 30           | 0.314599925 | 0.999994899    | 0.999998123 | N2O      | 2            |
| Dev11-bP | RegSVR | 17580     | 15         | 30           | 0.085454825 | 0.998819628    | 0.998935487 | RH       | 2            |

Figure 18

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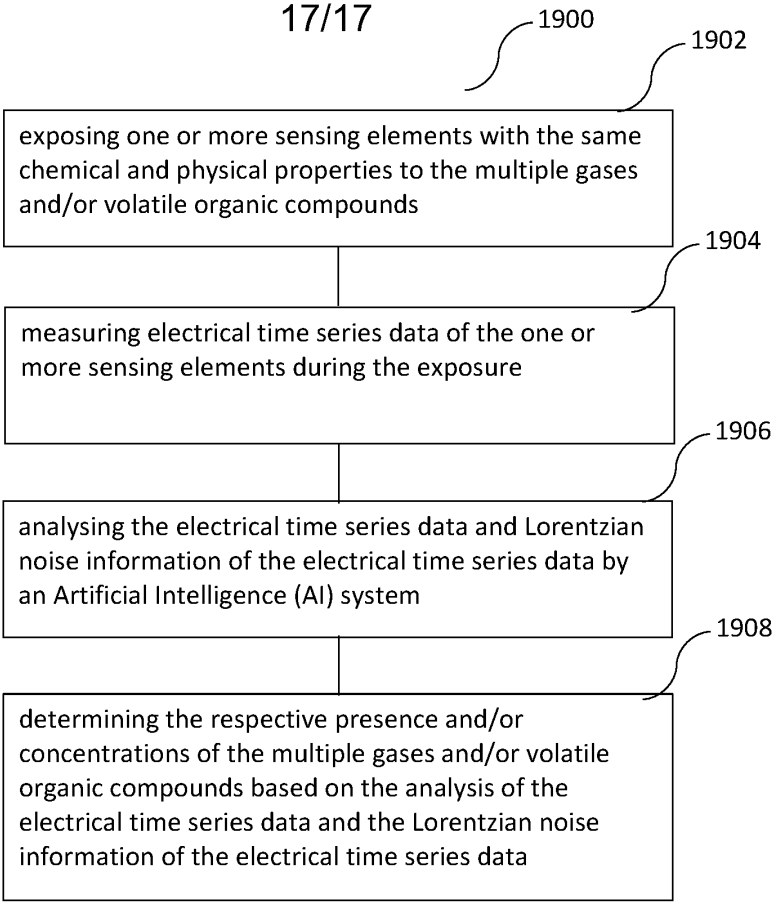


Figure 19

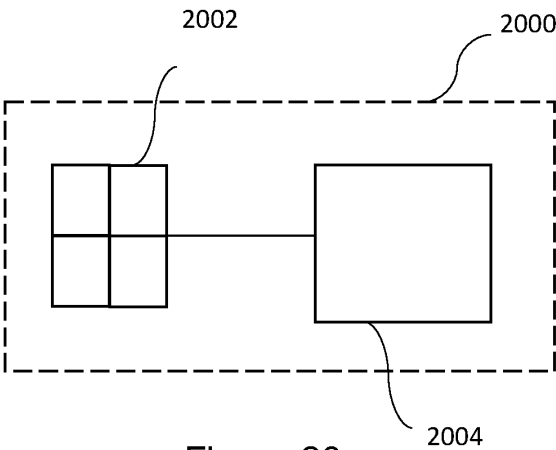


Figure 20