cipitate is dried in a rotary drier in an atmosphere of argon and is then ground.

EXAMPLE C

An ethanolic solution of 1000 g (4.8 mol) of $Si(OC_2H_5)_4$, 32.7 g (0.1 mol) of $Zr(OC_3H_7)_4$ and 14.9 g (0.1 mol) of $(CH_3)_2Si(OC_2H_5)_2$ is stirred under reflux. 500 ml of a 5% strength NH_3 solution are added at boiling temperature. After stirring for 1 hour the forming precipitate is treated with water and stirring is continued for a further 6 hours. The cooled precipitate is filtered off, again treated with 500 ml of NH_3 solution and introduced into a glandless reaction vessel for post-condensation. The washed precipitate is dried in a rotary drier in an atmosphere of argon and is then ground.

PREPARATION OF THE COMPOSITES

EXAMPLE 1

Filler from Example A	70.00 g
1,12-Dodecanediol dimethacrylate	6.28 g
2,2-Bis[4'-(2''-methacroylethoxy)phenyl]propane	23.26 g
4-Methoxyphenol	0.005 g
Ethylbenzoin	0.10 g
Camphorquinone	0.16 g
2-n-Butoxyethyl 4-(dimethylamino)benzoate	0.18 g
Butylhydroxytoluene	0.005 g

EXAMPLE 2

Filler from Example B	69.00 g
1,12-Dodecanediol dimethacrylate	6.5 g
2,2-Bis[4'-(2''-methacroylethoxy)phenyl]propane	25.05 g
4-Methoxyphenol	0.005 g
Ethylbenzoin	0.10 g
Camphorquinone	0.16 g
2-n-Butoxyethyl 4-(dimethylamino)benzoate	0.18 g
Butylhydroxytoluene	0.005 g

EXAMPLE 3

Filler from Example C	73.00 g
1,12-Dodecanediol dimethacrylate	5.64 g
2,2-Bis[4'-(2''-methacroylethoxy)phenyl]propane	20.90 g
4-Methoxyphenol	0.005 g
Ethylbenzoin	0.10 g
Camphorquinone	0.16 g
2-n-Butoxyethyl 4-(dimethylamino)benzoate	0.18 g
Butylhydroxytoluene	0.005 g

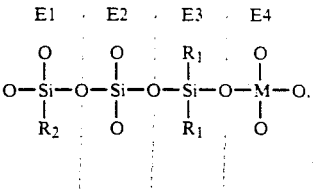
Following curing using a conventional light source, the following physical values were measured:

	Composite from Example			Comparison
	1	2	3	(commercial product)
Bending strength (N/mm^2)	115	112	117	60
Modulus of elasticity (N/mm^2)	6,400	6,900	4,600	3,600

The polishability of the resultant polymers was outstanding.

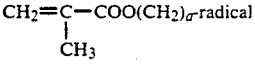
What is claimed is:

1. Dental filling material containing at least one polymerizable (meth)acrylic acid ester, characterized in that it contains 20 to 90% by weight, calculated on the total composition, of a compound consisting of the structural element E2 and at least one of the structural elements E1 and/or E3 and/or E4 of the general formula



where R_1 denotes a methyl, ethyl, n-propyl, isopropyl or an unsubstituted or CH_3—C_3H_7-substituted phenyl radical, R_2 denotes a CH_2=CH—, CH_2=CHCOO$(CH_2)_n$— or

or R_1,



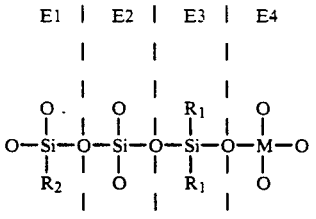
n denotes 0, 1, 2 or 3, and M denotes titanium or zirconium; and wherein further the molar ratio of the structural element E2 to the structural element E4, if present, is greater than 10:1.

2. Dental filling material according to claim **1**, characterized in that the molar ratio of the structural element E2 to the structural elements E1 and/or E3 and/or E4 is in each case between 50:1 and 10:1.

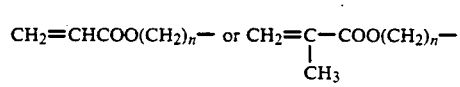
3. Dental filling material according to claim **2**, characterized in that the molar ratio of the structural element E2 to the structural elements E1 and/or E3 and/or E4 is in each case between 30:1 and 20:1, particularly about 25:1.

4. Dental filling material according to claim **2**, characterized in that the molar ratio of the structural elements E2:E1:E3:E4 is about 25:1:1:1.

5. Dental filling material containing at least one polymerizable (meth)acrylic acid ester, characterized in that it contains 20 to 90% by weight, calculated on the total composition, of a compound consisting of the structural element E2 and at least one of the structural elements E1 and/or E3 of the general formula:



where R_1 denotes a methyl, ethyl, n-propyl, isopropyl or an unsubstituted or CH_3—C_3H_7—substituted phenyl radical, R_2 denotes a CH_2=CH—,



radical or R_1, n denotes 0, 1, 2or 3, and M denotes titanium or zirconium.

6. A method of restoring tooth surfaces, said method comprising applying to a tooth in need of restoration a dental composition according to claim **1**.

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